l, 1955 50 cents

PACIFIC FISHERMAN

1955 New Gear Number

LIBRARY PACIFIC OCEANIC FISHERY INVEST
P O BOX 3830
HONOLULU T H
31-52

APR 1955
LIBRARY
FOFI
FISH & WILDLIFE SERVICE

P.31
37
43

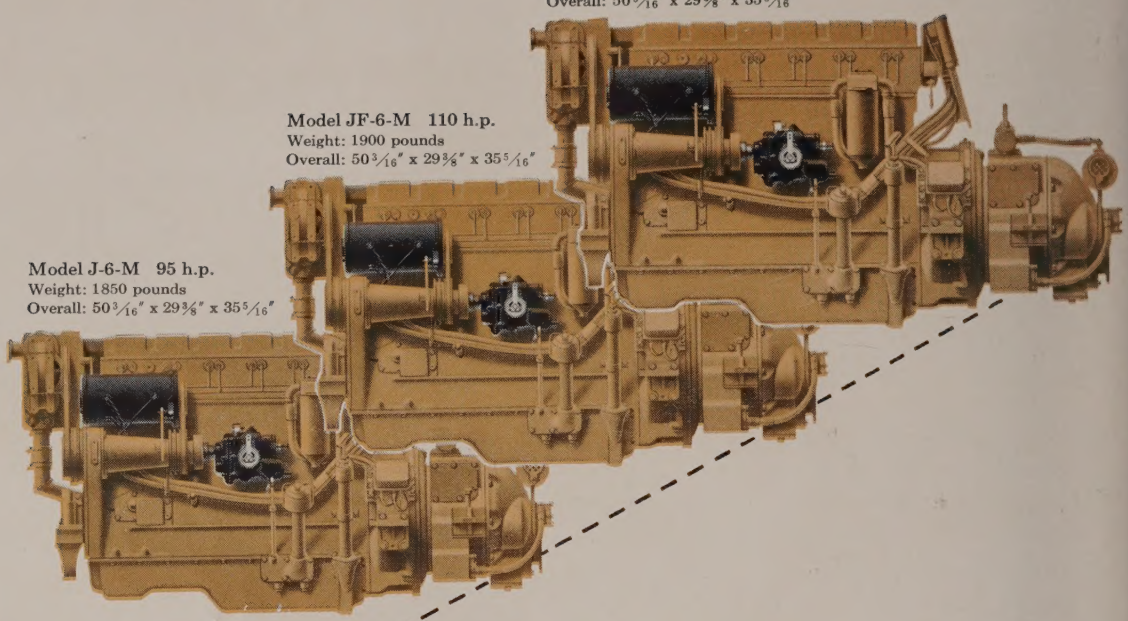
Newest thing in fishing boats—127 feet of steel tuna clipper slicing the sea in search of fish.

A MILLER FREEMAN PUBLICATION

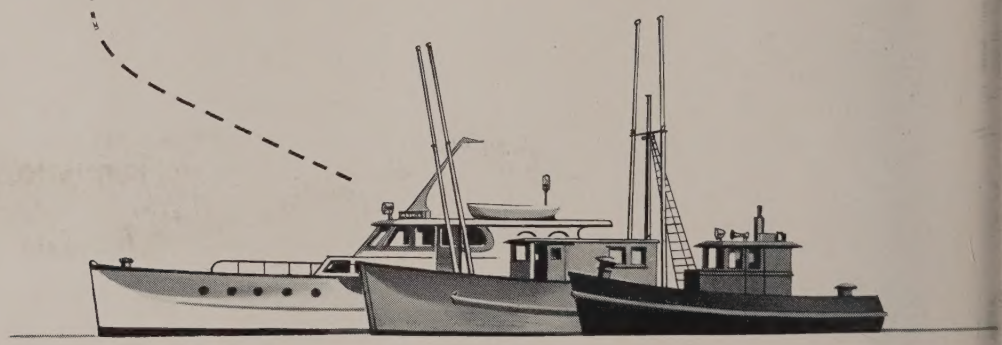
Model JN-6-M 125 h.p.
Weight: 1955 pounds
Overall: 50 3/16" x 29 3/8" x 35 5/16"

Model JF-6-M 110 h.p.
Weight: 1900 pounds
Overall: 50 3/16" x 29 3/8" x 35 5/16"

Model J-6-M 95 h.p.
Weight: 1850 pounds
Overall: 50 3/16" x 29 3/8" x 35 5/16"



3 light, compact, Cummins marine diesels!



Check the specifications on these three new diesels for fishing boats and other commercial or pleasure craft. See if one won't give you the power you need—in less space and with less weight!

The Cummins name tells you all three are rugged . . . dependable . . . economical. All run on inexpensive No. 2 diesel fuel. All have the exclusive PT fuel system—simpler to understand and work with than gasoline carburetion and ignition . . . so trouble-free that maintenance costs are negligible.

Now available from Cummins dealers in all major coastal cities. For full details, consult the dealer in your area or your own boat builder.

Cummins Engine Company, Inc., Columbus, Indiana

CUMMINS

the diesel that gives you the big plus

MORE PROFIT

(6-10-5

PORTLAND
Cummins Diesel Sales of Oregon, Inc.
Elfving's Marine & Builders Supply
646 North Front, Coos Bay, Oregon

LOS ANGELES
Cummins Service & Sales
Authorized Sales & Service:
SAN DIEGO—E. W. Equipment Company.

SAN FRANCISCO
Watson & Meehan
Authorized Sales & Service: STOCKTON—Stockton Fuel Pump & Inject
Service; SACRAMENTO—Frank J. Coyle; EUREKA—Fred E. Barnett.

SEATTLE
Cummins Diesel Sales of Washington, Inc.
Authorized Sales & Service: ABERDEEN—Kenny's Cummins Diesel Se
vice; SEATTLE—North Coast Marine Engine and Equipment Compar
KETCHIKAN, ALASKA—North Coast Marine Engine and Equipment C

PACIFIC FISHERMAN

Vol. 53 No. 5

APRIL, 1955

What's New in Newest Tuna Clippers? 15

Tariff and Sticks—NFI Twin Topics 24

Trawl Gear for B. C. Herring 27

Chilling Fish in Sea Water 31

Drum Seine Development 33

How Fishermen Use Synthetic Fibers 37

Steel Longline Gear Still Has Bugs 43

How Meredith Fried Fish Sticks 60

DeWitt Gilbert
Editor

Charles L. Shaw
Associate Editor

Stuart F. Leete
Associate Editor

Carlton L. Hillyard
Advertising Mgr.

Mrs. Helen McCauley
Associate Editor

Richard N. Crosby
Eastern Mgr.

A. W. Ponsford
Southwest Mgr.

Miller Freeman
President

Lawrence K. Smith
Vice President

William B. Freeman
Vice President

Miller Freeman Jr.
Secretary-Treasurer

Publishing Office

534 S.W. 3rd Ave., Portland 4, Oreg. ..... BEacon 6348

Editorial and Advertising Office

71 Columbia St., Seattle 4, Wash. ..... MAin 1626

Regional Offices

370 Lexington Ave., New York 17 ..... MUrray Hill 3-9294

1791 Howard St., Chicago 26, Ill. ..... ROgers Park 4-3420

402 Pender St., W., Vancouver, B.C. ..... MArine 7287

815 Witmer St., Los Angeles 17 ..... DUnkirk 9-1112

121 Second St., San Francisco 5 ..... GArfield 1-5887

315 N. Avalon, Wilmington, Calif. ..... TErminal 4-4538

3518 Dante St., New Orleans 18 ..... AMhurst 2762

SUBSCRIPTION RATES: U. S. and Canada—one year $3.00; two years $5.00; three years $7.00. Other countries — one year $4.00; two years $7.00.

CHANGE OF ADDRESS: Please send notice of change of address to 121 Second St., San Francisco 5, Calif., as early as possible and include both old and new addresses, plus zone number at new address.

ADVERTISING: Complete plates only should be sent to Pacific Fisherman, 235 N. W. Park Ave., Portland 9, Ore. . . . Advertising copy and cuts, instructions and insertion orders should be sent to the Seattle office.

PACIFIC FISHERMAN (with which is combined West Coast Fisheries). Published monthly except January when publication is semi-monthly, by Miller Freeman Publications, at 534 S. W. Third Ave., Portland 4, Ore. Entered as second class matter at the post office at Portland, Ore., under Act of March 3, 1879. Postmaster, please send Notice 3579 to PACIFIC FISHERMAN, 121 Second St., San Francisco 5, California.

A MILLER FREEMAN PUBLICATION

Vital Ruling Upholds State Control Over Ocean Fishing

● Ranking with the more important legal decisions affecting fisheries in a generation was the March 10 ruling of the Washington state supreme court, which unanimously upheld the constitutionality of the 1953 law providing for regulation of the transportation and sale within the state of fish caught outside territorial waters.

The law requires that fishermen transporting and landing fish within the state shall have a license to do so, regardless of where the fish are caught; and that the state director of fisheries may deny or revoke licenses which he judges would tend to impair or deplete the supply of fish.

The law thus upheld puts Washington on an equal footing with Oregon and California when it comes to regulating ocean fisheries based on its ports. It makes it possible for the state to join with the other states and Canada in protecting ocean fish during periods of immaturity or depletion.

Bluntly, it enables the state for the first time to join confidently with the other divisions of the coast in the control of ocean salmon fishing.

● Perhaps no aspect of the decision is more important than its destruction of one of the last arguments for the assumption by the Federal government of authority over the coastal fisheries of the states. So long as the states — or one of them — lacked authority to control the traffic in fish taken outside territorial waters, there remained a valid argument for the Federal government to assert its jurisdiction over the states' ocean fisheries.

First Salmon Settlement In Step With U. S. Trend

● Upward tendency manifest in 1955 wage settlements nationally was reflected in the initial agreements reached between the Alaska Salmon Industry, Inc., and the Alaska Fishermen's Union.

The settlements, which released the first tenders and expeditions to the Peninsula district, apply to the Alaska Fishermen's Union throughout the Territory, with the exception of Bristol Bay.

In short, monthly wages are increased by $20 across the board; while the basic rate for overtime pay is advanced from $2.16 to $2.28 per hour.

Salmon industry labor negotiations were well advanced as to time-table at presstime, with no crisis then threatening, although the several contracts still to be negotiated could easily produce serious disagreement.

Japanese To Advise Venezuelans

Japanese experts representative of a group of tuna canners will visit Venezuela this spring to study the fisheries and make recommendations for their development to the Association of Fish Canners of that country, according to an announcement by Dr. Uberto Mondolfo, its president.

It is expected that the studies will be concerned primarily with the possibilities of exploiting the tuna resources which are beginning to be found in the Gulf of Mexico and the Caribbean Sea.

U. S. - Mexican Tuna Venture

U. S. embassy reports from Mexico City say that a joint venture of United States and Mexican capital contemplates establishment of a new tuna plant at Tampico or Matamoros to exploit the tuna resources being discovered in the Gulf of Mexico.

Go creole with your cooking . . . serve a superb
Supper, New Orleans-Style
Tremendously tasty . . . amazingly easy . . when you start with today's finest-ever canned foods!
O-LA-LA! Those Louisiana cooks really know how to put together dishes that tickle the taste buds!
Their recipes are a melting pot of French and Spanish and "Old South" secrets. Most of them take a long time to prepare—for nothing is too much trouble in the land where cooking is considered an art.
Fortunately, you can duplicate many of their specialties—like the meal shown here—in a fraction of the time. For you can get all the major foods from soup to nuts in convenient Canco cans—the cans made by American Can Company.
Shrimp, fresh from the Gulf of Mexico, is a favorite—served endless ways. One of the most delectable is in a chilled cream-base soup. It's a cinch (no cooking or peeling)—thrifty, too!—when you get your shrimp straight from cans.
POTAGE AUX SHRIMP
Blend 1 can condensed cream of mushroom soup and 1¼ cups milk. Add 1 can (4½ oz. or 5 oz.) shrimp, drained and de-veined, and 1 to 2 tablespoons sherry, if desired. Chill. Serve in chilled bowls; sprinkle with chopped chives.
That's the perfect preliminary to a main course of sausages cooked in a piquant sauce that's typical of the fine seasoning tradition of the Bayou country. Sausages are one of more than 130 different meat products—from ham to hamburgers—for which American Can makes the right shape and type of can.
CREOLE SAUSAGE
1 large onion, sliced
½ green pepper, cut in strips
½ cup sliced celery
2 tablespoons shortening
1 can (1 lb., 4 oz.) tomatoes
1 can (8 oz.) tomato sauce
1 to 2 teaspoons chili powder
1 teaspoon sugar
½ teaspoon salt
2 cans (4 oz. each) or 1 can (9 oz.) Vienna sausage, drained and cut in thirds
Cook onion, green pepper and celery in shortening 5 minutes. Add tomatoes, tomato sauce, seasonings; mix well; simmer 10 minutes. Add sausage; stir; heat thoroughly. Serve with hot parsley rice.
Make even the vegetable course South-ern-style with this Greens 'n' Bacon recipe. Spinach never tasted so good! (Of course, it's better-than-ever spinach to start with—because American Can experts work constantly with growers to help them develop finer, tenderer vegetables.)
GREENS 'N' BACON
Drain 1 can (1 lb. 4 oz.) spinach, reserving liquid. Cook 2 strips bacon, chopped, in saucepan until crisp. Add spinach liquid, 1 tablespoon grated onion, 1 teaspoon vinegar, ¼ teaspoon salt and dash of pepper. Boil quickly to reduce liquid to about ½ cup. Add spinach; toss lightly; heat quickly.
Corn was one of the earliest staples of New Orleans; corn bread and muffins were a specialty. Here's a delightful new version of an old favorite—made with the delicious cream-style corn that comes in cans. You can taste the rich golden kernels all through the muffins!
CREAM OF CORN MUFFINS
Sift together 1½ cups sifted flour, 2 tablespoon sugar, 4 teaspoons double-acting baking powder and ½ teaspoon salt. Beat 1 egg; blend in 1 cup canned cream-style corn, ¼ cup milk and 2 tablespoons melted butter or margarine; pour over flour mixture. Stir until dry ingredients are just dampened; half fill greased muffin pans. Bake in hot oven (400°F.) 20 minutes, or until brown. Makes about 12 2-inch muffins.
Important Note: whenever you do not use a full can of food, cover and keep the remainder in the refrigerator right in the can. It's safe—and it's sensible!
For dessert, not just pecan pie Pineapple-Pecan Pie. A double treat—double quick to make when you start with both fruit and nuts from cans.
PINEAPPLE-PECAN PIE
½ cup butter or margarine
½ cup brown sugar, firmly packed
2 tablespoons flour
1 teaspoon vanilla
½ teaspoon salt
3 eggs, beaten
1 cup dark corn syrup
1 cup chopped canned pecans
1 can (1 lb.) pineapple tidbits, well drained
1 unbaked 9-inch pastry shell
Cream thoroughly butter, sugar, flour, vanilla and salt; blend in eggs and corn syrup. Fold in pecans and pineapple; pour into chilled pastry shell. Bake in mod. oven (350°F.) 1 hour, or until firm.
BEER · COFFEE
Beer goes so well with these zippy foods. For greatest convenience, get your beer or ale in quick-chilling, no-return cans—cans trademarked "Keglined," another development of American Can Company who invented the special can lining that makes it possible to pack beer in metal without affecting its delicate flavor.
After dinner, coffee, of course—the full-aroma, full-flavor coffee that comes in Canco's vacuum pack cans. Um-m-m.
These recipes were developed in Test Kitchens of American Can Company. They serve 6. You may use can weights that vary slightly from those given here.
If it comes in a Canco Can—it comes to you at its best!
American Can Company
Registered Trade Mark of American Can Company, N. Y., N. Y.
Supper, New Orleans-Style
POTAGE AUX SHRIMP
SAUSAGE CREOLE
GREENS 'N' BACON
CREAM OF CORN MUFFINS
PINEAPPLE-PECAN PIE
BEER
COFFEE

For the housewife... another Canco ad to help boost your sales

Here for the busy homemaker, *your* customer . . . Canco presents Supper, New Orleans-Style.

This Canco ad in full color and on two pages in the May issues of *Good Housekeeping* and *McCall's* will be directed to an estimated audience of over 15,000,000 people.

Quick, easy recipes will show homemakers how to prepare every dish in this tasty regional meal by using a wide variety of canned foods. And at the store, shopping for the ingredients of this low-cost and interesting meal, the housewife buys *your* canned foods and beverages—*if you do your part!*

There's money to be made here! Check your retail outlets and make sure that your brands are featured . . . priced attractively and displayed prominently.

Supper, New Orleans-Style, continues Canco's 1955 campaign of double service . . . service to the American housewife, your customer . . . service to you, our customers. Through this unique campaign, Canco actually creates a buying urge . . . helps build the prestige of all canned foods and beverages. The profits belong to *you!*

Go first to the people who are first!

AMERICAN CAN COMPANY

CANCO

New York, Chicago, San Francisco

PAULS LOCKNOT
gills powerful 70-pound seabass
(with light nylon salmon netting knit 5½" mesh)

It was a terrific fight. But Pauls Locknot Netting won. A catch like this proves one thing. When you gill a 70-pound seabass on 5½" mesh, you know you've got a mighty *unusual* knot.

And it's true. Pauls famous Locknot completely eliminates sawing and slipping where strain is greatest. In Pauls Netting *every strand in every mesh has strength.* It means that you keep 98 out of every 100 fish gilled. You'll use Pauls Locknot primarily for salmon gill netting. But Pauls is easily adapted to shad and seabass, too. So for a bigger, more profitable year, make your next order Pauls Locknot Netting.

PAULS

FISH NET DIVISION
THE LINEN THREAD COMPANY
357 West Ohio Street • Chicago, Illinois

PAULS netting is sold on the coast by these reputable distributors

Nordby Supply Co.
1300 Western Avenue
Seattle, Washington

Nordby Supply Co.
Salmon Bay Terminal
Seattle, Washington

Alfred Puusti & Co.
212 Taylor Avenue
Astoria, Oregon

Horace Mercurio
223 Alvarado Street
Monterey, California

Frank J. Cardinalli
Pittsburgh, California

© P 1954

Permanently buoyant

SPONGEX SEINE FLOATS

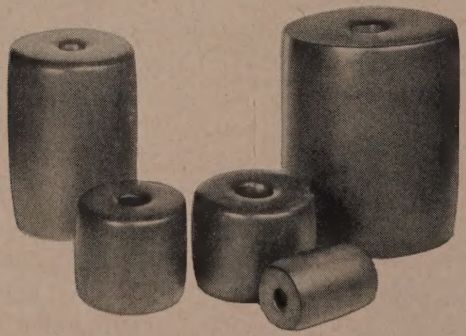
outperform and outlast cork!

One of the many commercial rigs now using the new Spongex seine floats.

The Spongex float is the modern float—for the modern fishing operation.

This new plastic float is lighter, tougher and more buoyant than cork. Since it won't absorb water, oil or gasoline, there's no drying problem. Its smooth surface resists sea growths and prevents net and line fouling. Replacements are at a minimum, since the Spongex float will not rot, crumble or shatter.

Join the growing number of fishermen now taking advantage of the new Spongex seine floats. For more information check with your supplier or write B. F. Goodrich Sponge Products Division, 145 Derby Place, Shelton, Connecticut.



Twelve different float sizes ranging from 3″ x 3½″ to 6″ x 7½″.

SPONGEX®
SEINE FLOATS
by
B.F. Goodrich
Sponge Products Division

chanic and
lper* remove
ston in
cord Time

people at the New York Boat ried to guess how long it would pull a piston on a standard pro- model Opposed Piston Diesel.

ing from scratch, the piston was ed and on the floor—in just two s flat!

was it possible in just two min- There are no gasketed joints to te—no lube or fuel oil connec- o break—no water connections k—no cylinder heads to remove. why, in two minutes, you can do O-P what it takes hours—even to do on comparable diesel s.

re's more—much more—to the f what Repowering with O-P can to your maintenance operations ofit. Why not get together with earby F-M Marine Specialist and t about the profitable difference -P Power? Fairbanks, Morse & hicago 5, Illinois.

*TV Actress Joan Kemp

FAIRBANKS-MORSE

a name worth remembering when you want the best

L AND DUAL FUEL ENGINES • DIESEL LOCOMOTIVES • RAIL CARS • ELECTRICAL MACHINERY • PUMPS • SCALES • HOME WATER SERVICE EQUIPMENT • MOWERS • MAGNETOS

PETTIT's strong anti-fouling copper bottom paints have long had the reputation for top protection against marine growths. Hundreds of fleet operators on the Pacific, Atlantic and Gulf coasts depend on Pettit bottom paints to give them longer service and cut down on number of haul-outs.

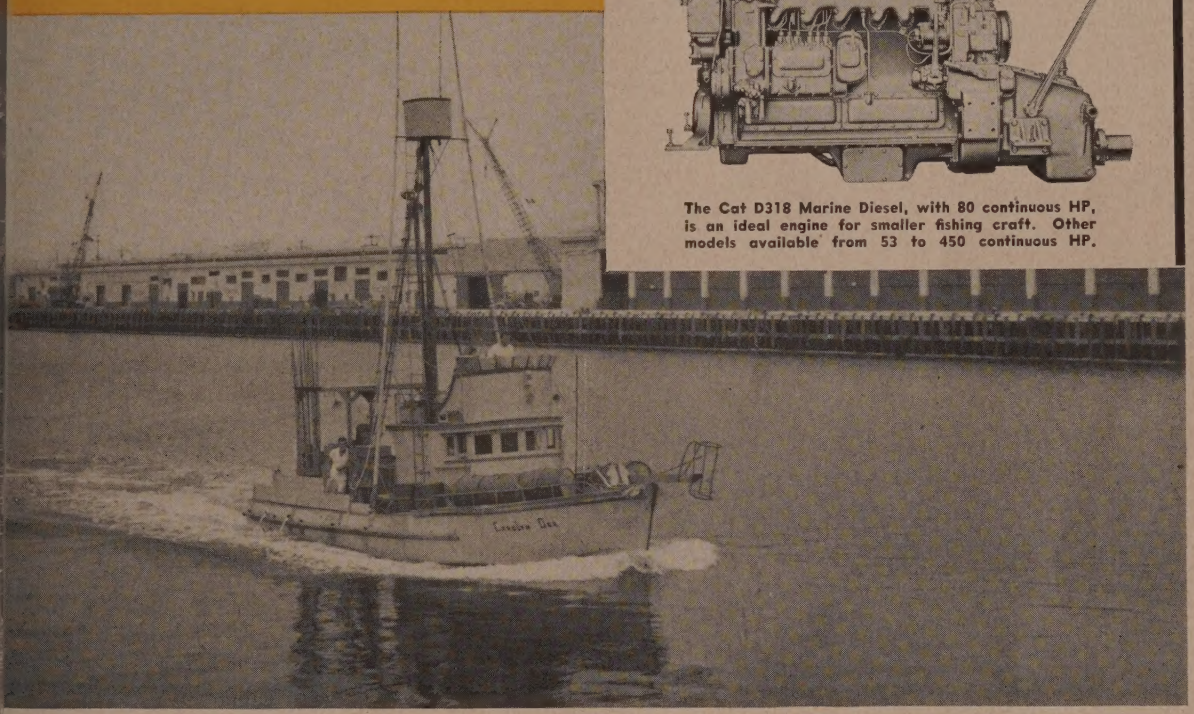
Why not test Pettit? The saving on maintenance costs alone will surprise you!

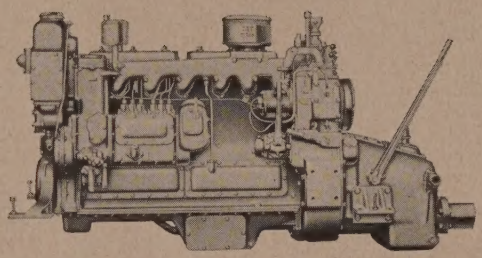
PETTIT
marine paint

PETTIT PAINT CO., INC.—BELLEVILLE, N. J.—SAN LEANDRO, CALI

PACIFIC COAST DISTRIBUTORS: Nordby Supply Co., Seattle, Wash. and Ketchikan, Alaska; The Beebe Co., Portland and Astoria, Oregon; Carstens Mar
Supplies, Spokane, Wash.; Gray's Motor Service, Inc., Salt Lake City, Utah; B. H. Hebgen Co., Ltd., San Francisco and Los Angeles, Calif.; Nuttall-Styris C
San Diego, Calif.; Outdoor Equipment Corp., Las Vegas, Nevada; Jack Bolton Marine, Denver, Colo.; Adanac Marine Supply Co., Ltd., Vancouver, B.
Ray Marine Distributing Co., Seattle, Wash.; Marine Components, Santa Monica, Calif.; Newport Supply Co., Newport Beach, Calif.; Pacific Marine & Supply C
Ltd., Honolulu, Hawaii.

"In 14,026 hours our CAT* Engine has never quit"





The Cat D318 Marine Diesel, with 80 continuous HP, is an ideal engine for smaller fishing craft. Other models available from 53 to 450 continuous HP.

The *Carolyn Dee,* owned by Dave L. and Ray H. Gale, is a 42-footer with 13½-foot beam and 6-foot draft. Fishing out of San Pedro, California, she cruises a radius of 300 miles for albacore, skipjack and for lobsters in winter. A Cat D4600 Engine, purchased in 1947, swings her 66 x 26-inch propeller.

"For the horsepower you get from this engine," says Dave Gale, "you can operate cheaper on fuel and parts than you can on any other engine of comparable size. Overhaul and repair costs less, too. When you're fishing for a living you want an engine you can depend on, one that will take you there and bring you back. In 14,026 hours we have never had this engine quit or fail. When we're fishing for lobster, the Cat idles for as long as 8 or 10 hours while we are pulling traps, and it never seems to hurt it. Other engines won't do this."

Today's Caterpillar Marine Diesels operate even more efficiently. And their rated horsepower is *honest* horsepower, all there at the shaft. They deliver it not just for a minute or two but for hours, days or weeks at a stretch. And because Cat Marine Diesels are economical on fuel, you can carry more fish and less fuel.

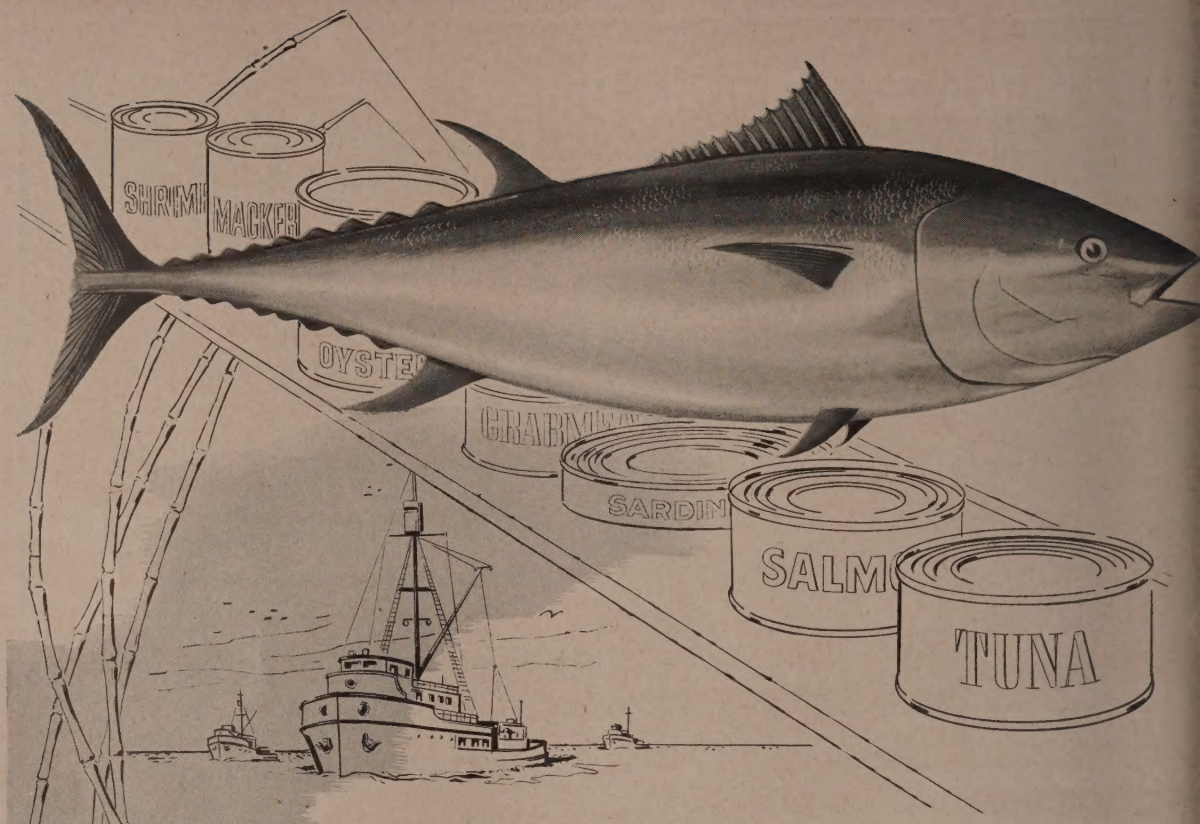
You can depend on Caterpillar service in every major port. Let your dealer show you how the right Caterpillar Marine Engine can put more profit in your fishing. He has a wide range of sizes, up to 450 continuous HP. And you can count on him always for genuine Caterpillar parts.

Caterpillar Tractor Co., San Leandro, Cal.; Peoria, Ill., U. S. A.

CATERPILLAR*

*Both Cat and Caterpillar are registered trademarks—®

MODERN HEAVY-DUTY MARINE POWER



1905-1955
Our Fiftieth Year of Tailor-Made Packaging

TAILOR-MADE PACKAGE SERVICE

Seafood is in demand. . .
Continental meets your demands

Whenever and wherever fish boats dock, from Alaska to San Diego Continental is ready to deliver precision-made cans to meet canners exactin needs for quality packs of tuna, salmon, sardines, mackerel, crab or oyster Prompt, on time deliveries are only one of the important operations o Continental's proven quality seafood can service.

Continental operates nine can manufacturing plants, strategically lo cated on the Pacific Coast, backed by 27 years of can making experience Our experts are always ready to assist the seafood industry in developin better quality products, improved economical operations, to better proce seafoods and make them ready for distribution.

If you are planning the development of new seafood products, ca Continental's research technicians.

METAL CONTAINER PLANTS

Seattle	Oakland
Walla Walla	Stockton
Portland	San Jose
Sacramento	Los Angeles
Terminal Island	

RESEARCH LABORATORIES

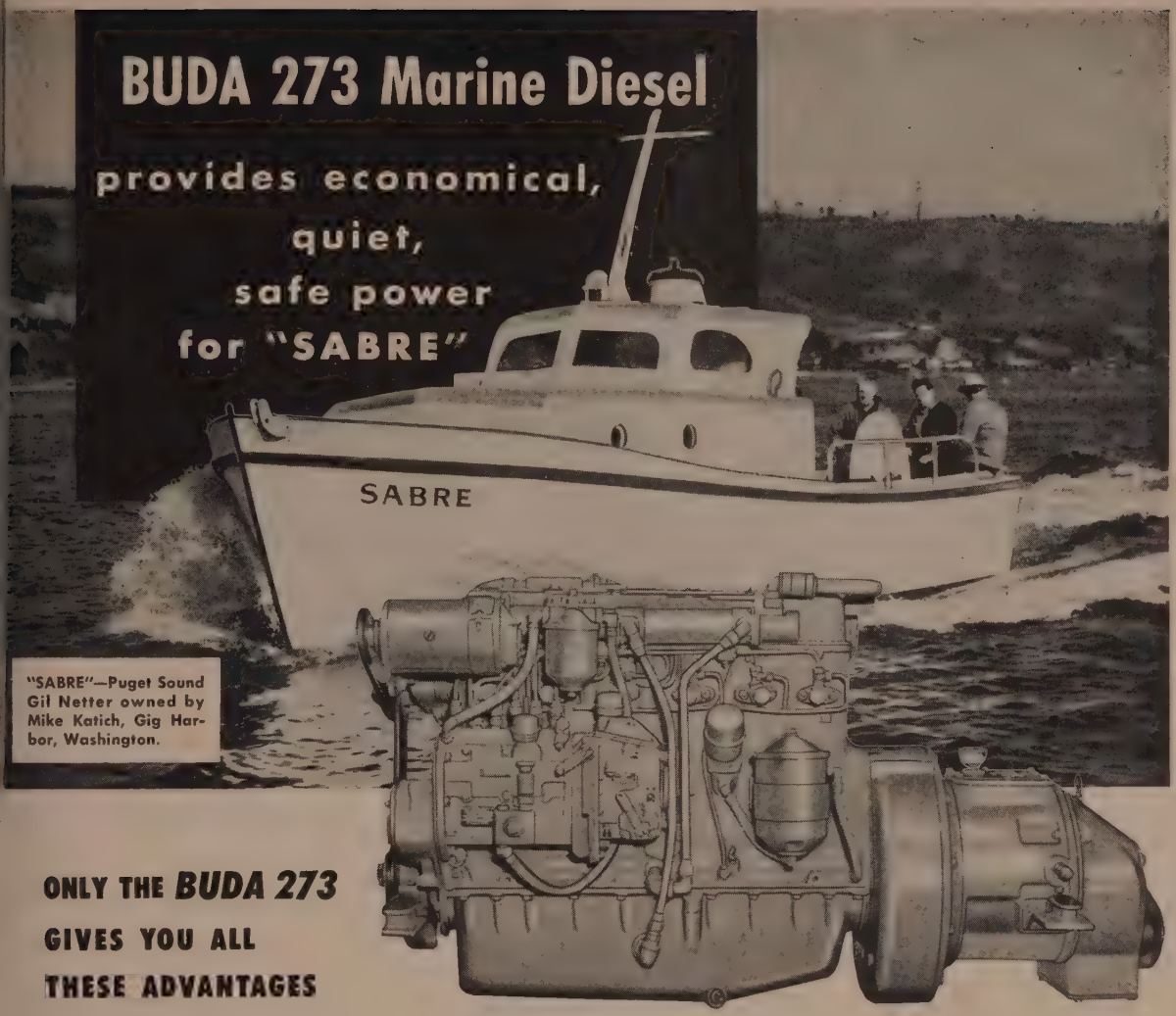
Portland
Hayward
Whittier

CONTINENTAL CAN COMPANY

1120 Wilshire Blvd., Los Angeles 17
Russ Building, San Francisco 4
Skinner Building, Seattle 1
Yeon Building, Portland 4

BUDA 273 Marine Diesel

provides economical, quiet, safe power for "SABRE"



"SABRE"—Puget Sound Gil Netter owned by Mike Katich, Gig Harbor, Washington.

ONLY THE *BUDA 273* GIVES YOU ALL THESE ADVANTAGES

Efficient, Economical Performance

Built to operate for hours on end at slow speeds without fouling or damage to the engine . . . ready and able to move you *fast* at the touch of the throttle, the Buda 6 DAMR-273 Marine Diesel is the ideal engine for gil netters, lobster boats, trollers, oyster boats and charter boats. Positive fuel injection system with built-in governor gets maximum horsepower and performance out of every gallon of fuel for real money-saving economy.

Smooth, Quiet Power

Touch the starter button and listen to a *really quiet, vibration-free marine diesel!* Four cycle design, carefully balanced crankshaft, precision-made bearings, balanced rods, 45,000 psi Tensile crankcase and cylinder casting, plus the most efficient fuel injection system made, all add up to the kind of smooth whisper-quiet power you can live with day after day.

Maximum Life

Although it's a compact engine weighing about 1000 lbs. the 273 is every inch a rugged heavy duty engine. Drop forged Tocco hardened crankshaft with ground journal surfaces, rifle drilled for pressure lubrication to the 7 oversize precision main and rod bearings, 1 piece chrome-nickel iron crankcase and cylinder casting heavily ribbed to insure rigidity and permanent alignment, aluminum alloy pistons, special analysis intake and exhaust valves and many other quality features you expect only in bigger, more costly engines, give the Buda 273 the long life that means more profitable operation.

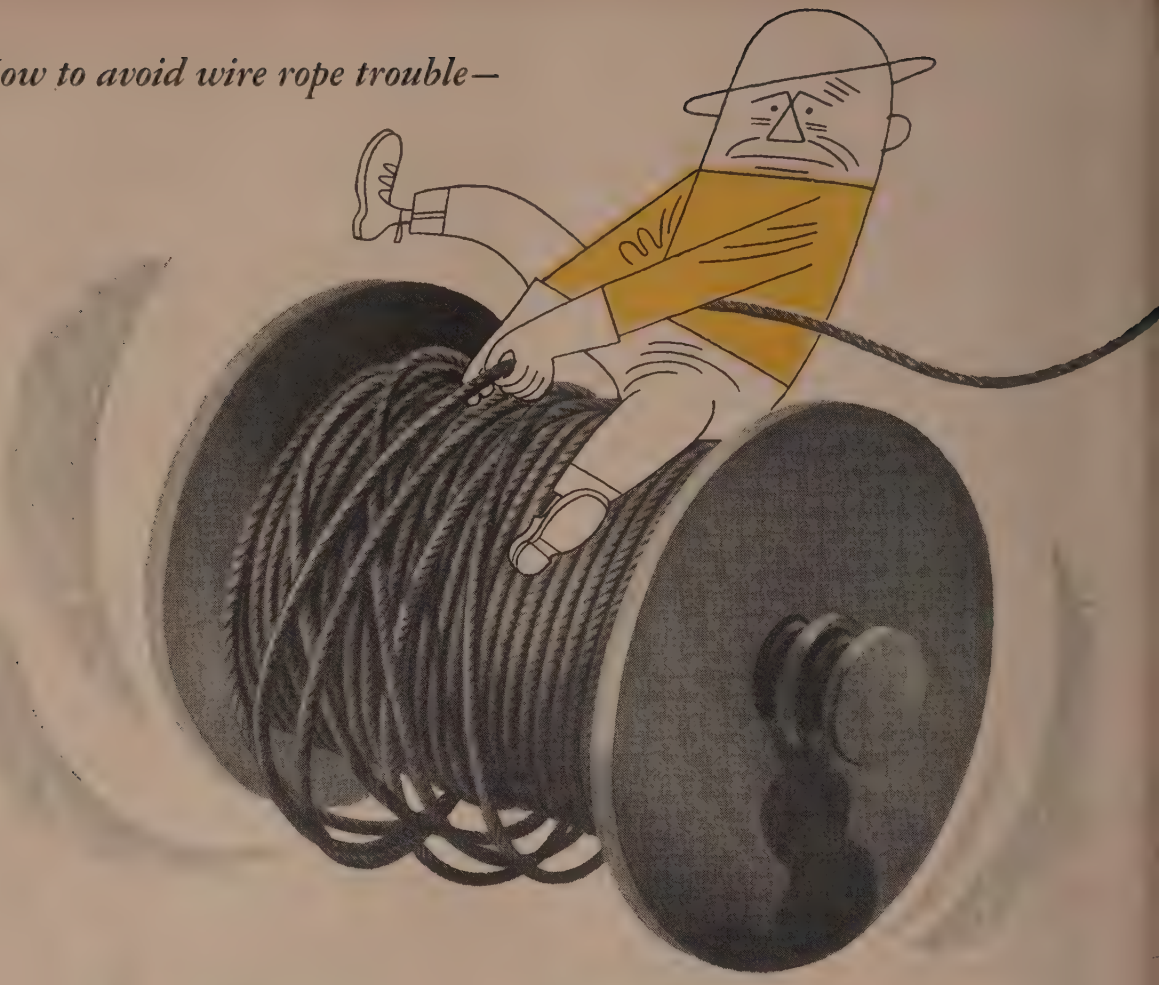
Before *you re-power or specify any engine in a new boat, get the facts on the Buda 273 Marine Diesel. Your near-by Buda Marine Distributor has all the details.*

M-23

BUDA DIVISION • HARVEY, ILLINOIS

ALLIS-CHALMERS MANUFACTURING COMPANY

How to avoid wire rope trouble—



Overwinding or crosswinding can cut rope life up to 90%

Because it causes crushing and abrasion, overwinding or crosswinding of rope on the drum greatly reduces rope life. If overwinding can't be avoided, you can reduce spooling problems by checking for undercut drum flanges, improper drum and sheave alignment, or excessive fleet angle. Installation of a "turnback bar", drum grooving, or "line spoolers" may also be profitable.

Most users in the West report less trouble, longer service when they rig up with Tiger Brand Wire Rope. No wonder it outsells all other brands. Want more facts? See your local Tiger Brand Distributor or write United States Steel, 1403 Russ Bldg., San Francisco 6.

USS TIGER BRAND Wire Rope

United States Steel Corporation—Columbia-Geneva Steel Division
In the East: American Steel and Wire Division

UNITED STATES STEEL

NOW!

GOLDEN DIPT BREADING

DESIGNED FOR YOUR PRODUCT... MEAT, FISH OR POULTRY

DESIGNED TO YOUR PLANT CONDITIONS

DESIGNED TO ABSORB 32% LESS COOKING OIL THAN ORDINARY BREADING

CUSTOM-BLENDED TO MEET YOUR SPECIFIC BREADING REQUIREMENTS.

Skilled technicians from the Golden Dipt Laboratories work with you in developing your own special breading. This *personalized* custom-blend is made from the basic Golden Dipt formula and contains the big "3" ingredients for building repeat sales for your product.

- **Soft winter wheat dehydrated granules that absorb 32% less cooking oil.**
- **MSG... the miracle seasoning that emphasizes the natural flavor of your product.**
- **Mel-Ox3... a new antioxidant discovery that retains the natural flavor of your product even when held in cold storage as long as 12 months.**

NOTHING TO ADD • NOTHING TO MIX
THE EGGS AND MILK ARE IN IT
GOLDEN DIPT
The Original
READY-MIXED
BREADING
FOR DEEP FAT OR PAN FRYING FISH, SEAFOOD, CHICKEN, MEATS, FRITTERS, CROQUETTES
GOLDEN DIPT DIV.

Your custom-blend of Golden Dipt will be ready-mixed... nothing to add... nothing to mix. The eggs, milk and seasoning are already in it... assuring you of controlled costs and quality.

Give your meat, fish or poultry added character with Golden Dipt tailor-made breading.

Get the pick-up you want... the texture you want... the color you want.

Phone, Wire or Write...

Golden Dipt Laboratories
Meletio Seafood Company
6th & Franklin Ave.
St. Louis, Missouri

When a Wash is Needed

USE

GOLDEN DIPT BATTER MIX

It's complete... there's nothing to add but water.

REPLACEMENT OR A REFUND OF MONEY
Guaranteed by Good Housekeeping
IF NOT AS ADVERTISED THEREIN

GOLDEN DIPT Ready-Mixed Breading... the only product of its type bearing the Good Housekeeping Seal.

Do it today... it's your first step toward the perfect finish for your product.

GOLDEN DIPT DIVISION, MELETIO SEAFOOD COMPANY
6th and Franklin Avenue, St. Louis 1, Missouri

Please send me a free sample of

☐ Golden Dipt Ready-Mixed Breading
☐ Golden Dipt Batter Mix ☐ Golden Dipt Processor's Blend

Individual Name .....
Company Name .....
Address .....
City ..... State .....

GOLDEN DIPT DIV. Meletio Seafood Company St. Louis, Mo.

In Canada write, Golden Dipt, Como Trading Corp. 443 St. Francois Xavier, Montreal, Canada

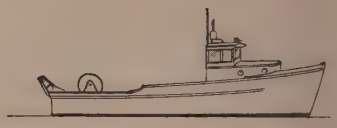
Represented by Morrill Nelson Co., 1248 Wholesale St., Los Angeles, California; William O. Dooms Co., 3105 Grove Street, Oakland, California; Portland Fish Co., 301 N.W. Third Ave., Portland, Oregon; James A. Edington, Inc., 1000 Fourth Ave. So., Seattle, Washington.

NOW THERE ARE THREE!

BARBOUR'S

THE LINEN THREAD CO., INC.

- **NEW BRAIDED DOUBLE-KNOT NYLON GILL NETTING**
- **REGULAR DOUBLE-KNOT NYLON GILL NETTING**
- **LINEN DOUBLE-KNOT GILL NETTING**



All three have been proved by Pacific Coast salmon fishermen from Puget Sound to Bristol Bay.

Quality and Dependability are woven into every inch of every mesh.

BARBOUR'S QUALITIES . . . YOU CAN DEPEND ON!

- Minimum knot-slippage & stretch!
- Long life!
- Uniform twine size!

And When You Put Your Cash On the Line . . . Make Sure It's PLYMOUTH

PLYMOUTH TRADE MARK 1824

KEEPING AHEAD of the constantly changing requirements for vessel equipment, fishing gear and cannery supplies is a habit of 58 years standing with us!

Pacific Marine Supply Co.

Serving the Northwest and Alaska since 1897

1217-1223 WESTERN AVE., SEATTLE 1. MU 4848

eizures Put Protection quarely Up to U. S.

Continuing seizure of American tuna vessels operating the high seas—as construed by the United States—off e coast of South America is believed to be receiving ore attention from the Department of State than at first eets the eye.

Fines have been assessed and paid, and claims have been ed by the vessels with the Department, from which no gnificant statements or comments have issued. Certainly, e Department has the case put squarely before it.

Serious consultations are known to have been held on e matter, and these have involved weighty subjects, such what constitutes the Continental Shelf; and is there one f South America?

The South American countries asserting their authority require licensing of vessels are believed to be relying r legalistic justification of their position on the Truman octrine enunciated in 1945.

The United States, on the other hand, presumably con- nues to adhere to President Eisenhower's statement of ct. 30, 1953, when he wrote:

"It will continue to be the policy of the United States assert the right of its nationals to engage in fishing on e high seas outside the three-mile limit for territorial aters."

Presumably also, the Department of State is proceeding s directed by Public Law No. 680, 83rd Congress, signed y the President Aug. 27, 1954, designed to protect United tates fishing vessels in their lawful operations on the igh seas; and to compensate them for any losses sustained y them as result of foreign interference with them in such awful operations.

Turmoil Threat Fades With Setnet Exemption

● Exemption of setnets and other forms of stationary gill- ets from the fixed gear spacing requirements of the White Act was granted by Congress early in March.

This served to avoid what threatened to become a chaotic condition in some Alaska salmon districts as result of the 1954 ruling of Federal Judge George Folta, who held that setnets are "fixed gear" within the meaning of the law. This made it incumbent upon the Fish and Wildlife Service in its regulations to require that setnets not be fished ess than 1,800' from each other, or any other form of gear. The amendment grants setnets exemption from this spacing requirement; and the Service has said that under he exemption it would permit setnet spacing on the same distance basis as in 1954.

It should be noted that the White Act amendment does not change the status of setnets as fixed gear; but merely grants them an exception from the spacing provision of the law.

In keeping with its announced intention, the Fish and Wildlife Service immediately set about drawing up additional regulations implementing the White Act amendment in such a manner as to avoid conflict between units of gear. This is expected to be done by particularizing in the regulations the areas which are open to setnet fishing and those open to other forms of gear—which of course means traps.

Thus a setnet must be fished on a specific location, and in such a manner as not to encroach upon adjacent units of gear.

● Following completion of the readjustment resulting from the emergency amendment of the White Act, the Department of the Interior is expected to submit to Congress a proposal for general revision of the 31-year-old law under which it administers the Alaska fisheries.

While details of this proposed general revision had not been made public at presstime, it was considered altogether probable that they would include means by which the Fish and Wildlife Service would be enabled to control more fully the intensity of fishing by regulating the amount of gear fished and its movement from place to place.

There is no likelihood that such a general amendment of the law could be made effective for the coming fishing season.

35% of Tuna Now Used For Canning Imported

● Plans of the American Tunaboat Association, San Diego cooperative, to interest its members in purchasing a tuna cannery in San Diego had not crystalized as this issue of *Pacific Fisherman* went to press.

In the meantime, tuna was continuing to arrive in port from domestic vessels and was being held under refrigeration in the ports of San Diego and San Pedro, awaiting unloading. Only one cannery in San Diego was reported to be in operation.

Frozen tuna continued to be imported into Southern California. For the two months of January and February, the Fish and Wildlife Service reported that, of the 18,887 tons of tuna canned in Southern California, imported fish accounted for 6,673 tons, largely Albacore. In the same period of 1954 the tonnage of imported frozen tuna used was only 2,914.

During the month of February, Southern California canneries processed 2,418 tons of Albacore and 505 tons of Yellowfin from Japan; while from South America they took 40 tons of Yellowfin and 672 tons of Skipjack.

Approximately 1,000 tons of tuna were lost when two

freezerships, the *Toni B* and the *Sea Lark*, sank in waters of Central America. The latter boat was owned by National Marine Terminals, Inc., San Diego.

The Cannery Workers and Fishermen's Union in San Diego, AFL, warned that it was prepared to picket any cannery which processed imported tuna out of rotation with the canning of tuna from local boats. Some vessels in the bait fleet were being unloaded by canneries on a hardship basis, for example, the *Coimbra* which suffered breaks in her ammonia lines early in March; and the *Joe Maria*.

Purse seiners from San Pedro were leaving port for the tuna grounds, although as this issue of *Pacific Fisherman* went to press no price had been negotiated with canneries. About four seiners had returned to port early in March with tuna which was unloaded by harbor canneries. On Terminal Island cannery was reported to have been pic eted by one of the fishermen's unions.

The American Tunaboat Association reported no pro ress in its efforts to establish a price contract, on the 19 level, with tuna canneries.

Tonnage processed by California canneries in the fi two months of 1955 was considerably less than in 195 18,887 as compared to 25,363. And the percentage of im ported tuna in the latter figure was considerably less th in 1955.

About 30 tuna purse seiners were at sea in early Marc the Fishermen's Cooperative Association reported.

Japanese Expect Salmon Pack of 1,300,000 Cases

With estimated salmon production of about 1,300,000 cases, and estimates that the market will absorb a like amount, this is described as a "boom" year in the Japanese canned salmon industry.

Production estimates have been worked out in some detail, based on the capacity of the "motherships" and the number of gillnet boats. The "mothership" schedule of the first official announcement has been slightly modified: for instance, division into two such ships instead of joint management of one ship by two firms, but without increase in number of dependent fishing boats, etc. However, it is figured that the pack of 13 "motherships" with a total of 26 canning lines may reach approximately 1,100,000 cases. To this, the pack of ocean-caught salmon in Honshu canneries should add about 100,000 cases, with another 100,000 cases of local and middle and south Kurile fish from Hokkaido plants, bringing the total to 1,300,000.

At the same time, the principal trading companies have great hope that the British government will grant an increased import license framework for canned salmon. Last year, it is said, British import licenses amounted to some £2,500,000 to £2,800,000, and Japanese traders are hoping for an allocation of about two and a half times that amount. On this basis, Japanese traders are figuring on total exports to England of about 700,000 cases.

They also count on exports of 200,000 cases to other countries; while 400,000 cases (mainly Chums and Pinks) will move in the domestic market. This would dispose of the 1,300,000-case output — a surprising figure for post-war times, though it should not be extremely difficult in view of earlier records.

An added spur to the "salmon boom" in northern Japan was given by the preliminary announcement early in February of the names of gillnet boats assigned to the "motherships" for Aleutian and Okhotsk areas. Of the total of 334 such boats (not including 58 "inspection" boats), 147 have their home ports on Hokkaido, while 180 are registered at various Honshu ports.

Co-Op Reduction Plant Starts at Prince Rupert

The first co-operative fish reduction plant in Canada, located at Prince Rupert, B. C., went into production recently, with a record herring catch which saw over 8,000 tons landed in a 48 hour period. The record run was discovered in Kitkatla Pass, a few miles south of Prince Rupert.

Plant Manager Michael Krueger said the record catch decended like an avalanche, and gave the new plant an inauguration such has never been encountered in any similar operation.

The reduction plant was developed by the Prince Rupert Fishermen's Co-operative Association, and is being given support by the Fishing Vessel Owners Association and Pacific Coast Fishermen's Marine Insurance Co.

Institute Will Study Salmon Migrations

Fisheries Research Institute of th University of Washington, now e gaged in a long-range research pr gram on Alaska salmon financed b the Alaska Salmon Industry, Inc., w also take on a study of salmon m grations in the high seas, under a $64 000 contract with the U.S. Fish Wildlife Service recently approved b the University's board of regents.

This work is part of an investig tion required by the Internation North Pacific Fisheries Conventic between the United States, Canad and Japan, to determine more defi itely a proper dividing line betwee Japanese and American fishing ope ations, now provisionally set at 17 W. longitude. It will involve intens tagging operations to ascertain th range of movement of all five speci of salmon from their respective spaw ing grounds on the American an Asiatic sides: the dividing line to b readjusted according to where the fi from either side predominate.

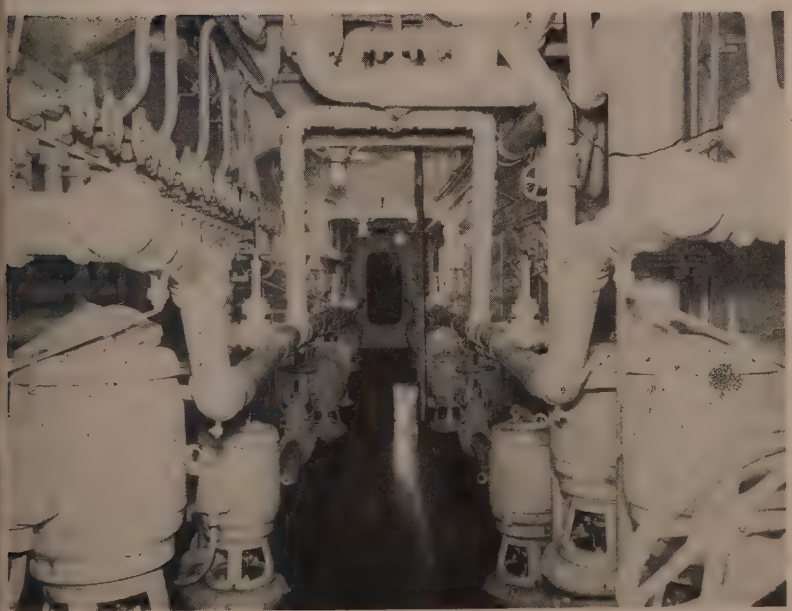
Dr. William F. Thompson, direct of the Institute, says that, aside fro its practical application, the proje will provide opportunity for researc on a phase of salmon life-histo hitherto untouched, as well as for d veloping techniques for recoverin identifying and marking salmon deep-sea areas.

California Tuna Operations—February, 1955

(Approximate figures for tonnage by species and total case pack)

San Diego		San Pedro		Combin
Species	Tons	Species	Tons	To
Yellowfin	33	Yellowfin	1,796	1,8
Skipjack	150	Skipjack	3,486	3,6
Albacore	107	Albacore	2,448	2,5
Bluefin	none	Bluefin	none	
Yellowtail	none	Yellowtail	none	
Bonito	none	Bonito	17	
Total	290	Total	7,747	8,0
Pack in cases	13,644	Pack in cases	344,298	356,9

WHAT'S NEW
In the Newest Clippers?



Main Street of a tuna clipper's hull—the **Cabrillo** shaft alley, showing the multiple Fairbanks-Morse pump-and-motor installation for brine circulation and bait water supply.

● *Cabrillo* and *Dominator* were created because two young San Diego skippers had the courage and imagination to see the need for new tuna clippers to sail from the port where tuna first became a major industry.

The boats were on their maiden voyages as these words were written. From their homes on the hills of Point Loma, owners Joe and George Soares, brothers, watched the 127′ clippers begin what all hope will be a long career of catching tuna.

These boats have the benefit of many years of experience in the design and construction of the "ideal" tuna boat. A well-designed live bait vessel must give the fishermen every opportunity to fish tuna efficiently and quickly, with the minimum of dif-

Photographs accompanying this article are all the work of Bruce Nicholason, staff photographer for National Steel & Shipbuilding Corporation.

Editor's Note — The original "Dominator" was built of steel in 1945 at Tacoma. She was lost in 1947 at the Galapagos Islands. The original "Cabrillo," built in 1943, also was lost.

no match for MUSCLES OF STEEL

America's towering dams stand as mighty monuments to the efficiency of modern excavating and earth-moving equipment. On these machines, *muscles of steel* rugged wire rope handle with ease and dispatch the tasks that once were back-breaking for man and beast.

Wherever big construction projects are under way, you'll find Wickwire Rope at work—helping to do a better, faster and more efficient job.

Same way—in the mines and quarries ...in the oil fields and logging camps... with the fishing fleets and in materials handling. Here, too, Wickwire Rope has won outstanding preference because of its proved durability and demonstrated reliability and economy.

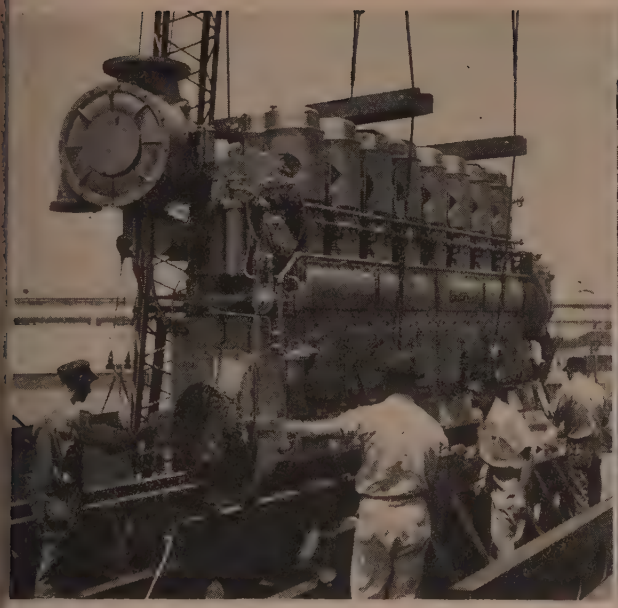
every industry benefits from wire rope

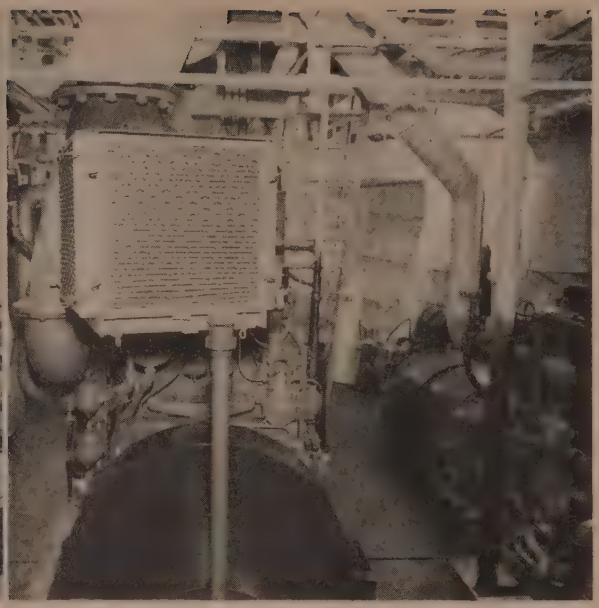
WICKWIRE ROPE

CF&I PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

THE COLORADO FUEL AND IRON CORPORATION — Abilene (Tex.) • Denver • Houston • Odessa (Tex.) • Phoenix • Salt Lake City • Tulsa
PACIFIC COAST DIVISION— Los Angeles • Oakland • Portland • San Francisco • Seattle • Spokane
WICKWIRE SPENCER STEEL DIVISION— Boston • Buffalo • Chattanooga • Chicago • Detroit • Emlenton (Pa.) • New Orleans • New York • Philadelphia

2694





Power for a clipper—Two views of **Cabrillo's** 950-hp. Enterprise main diesel engine. On the left, the engine is being placed on the pre-fabricated enginebed, which in turn will be installed in the hull. On the right, looking forward in the engineroom, with the air intake of the Enterprise diesel's supercharger masking much of the main engine.

Equipment Aboard Soares' Clippers

Main Engine—
Enterprise diesel, Model DMG - 38950-bhp. at 450 rpm, 8-cyl., 12x15", turbo-charged, 2:1 reduction.

Tail Shaft—
Monel, 6½" diameter.

Steering—
Sperry gyro compass automatic helm, working through Sperry steering engine.

Propeller—
Columbian Bronze, 5-bladed, 90 x 74", M.E. style.

Bearings—
Goodrich cutless rubber bearings outboard in the stern tube.

Auxiliaries—
Pacific diesels, two 150-kw. generating sets manufactured by J. T. Siler Co., Wilmington, Calif.

Refrigeration—
Worthington compressors, four 6x6" units, each driven by 30-hp. motor.

Pumps—
Fairbanks-Morse in various sizes in all installations.

Deck Gear—
Northern cargo winch and anchor windlass from Tacoma Boat Building Co.

Tenders—
Two Driscoll power tenders with 100-hp. Lathrop motors; two Boyce skiffs.

Electronic Instruments—
Raytheon recording Fathometer; radio compass; radar; 500-w. and 100-w. radiophones.

Painting
American Marine Paint Co. products.

Piping—
Plastic piping by Kraloy Plastic Pipe Co.

Filters—
Winslow lube oil type.

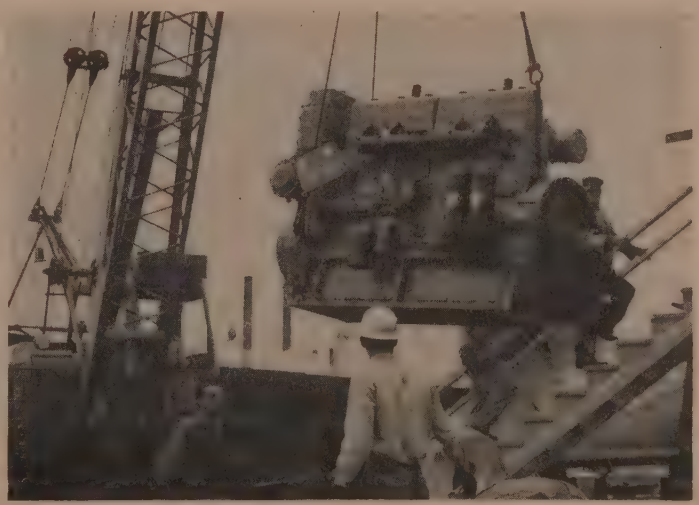
ficulty; to place those fish in the holds under dependable refrigeration; and to return home with a full cargo in a seaworthy, stable vessel.

National Steel & Shipbuilding Co., San Diego, is the builder of the pair, whose design is based upon the standard NASSCO 340-ton type, similar in many respects to the *Sea Preme* and the *Conte Bianco*, with modifications by Wendell H. Calkins, the yard's naval architect. Propulsion is by Enterprise.

Tuna fishing operations require a low freeboard aft, with the stern almost awash; large volumes of water above and below deck; and deck space around the stern sufficient for loading the 20 to 25 tons of tuna that are the average "take" by bait fishing a school of tuna.

Yard and architect went to work on these boats, utilizing the combined experience of the Soares brothers. The problem was to build boats to meet the conflicting requirements of a low deck aft, creating a reduction in stability and reserve buoyancy; and at the same time to provide safe and stable vessels.

● *STABILITY—Cabrillo* and *Dominator*, declare their architect and builder, have sufficient beam and void



Swinging auxiliary Pacific diesel engine aboard the tuna clipper **Dominator.** This vessel and her sister **Cabrillo** each have a pair of these Pacific diesel-generator sets, producing 150 kw. at 900 rpm. They were manufactured by J. T. Siler Co., Wilmington, Calif.

M. V. "CABRILLO"
(DELIVERED NOV. 1954)

Built for:

BIG PAYLOADS

FAST PASSAGES

LONG CRUISING RANGE

with

MAXIMUM EFFICIENCY

LOW OPERATING COST

LITTLE MAINTENANCE

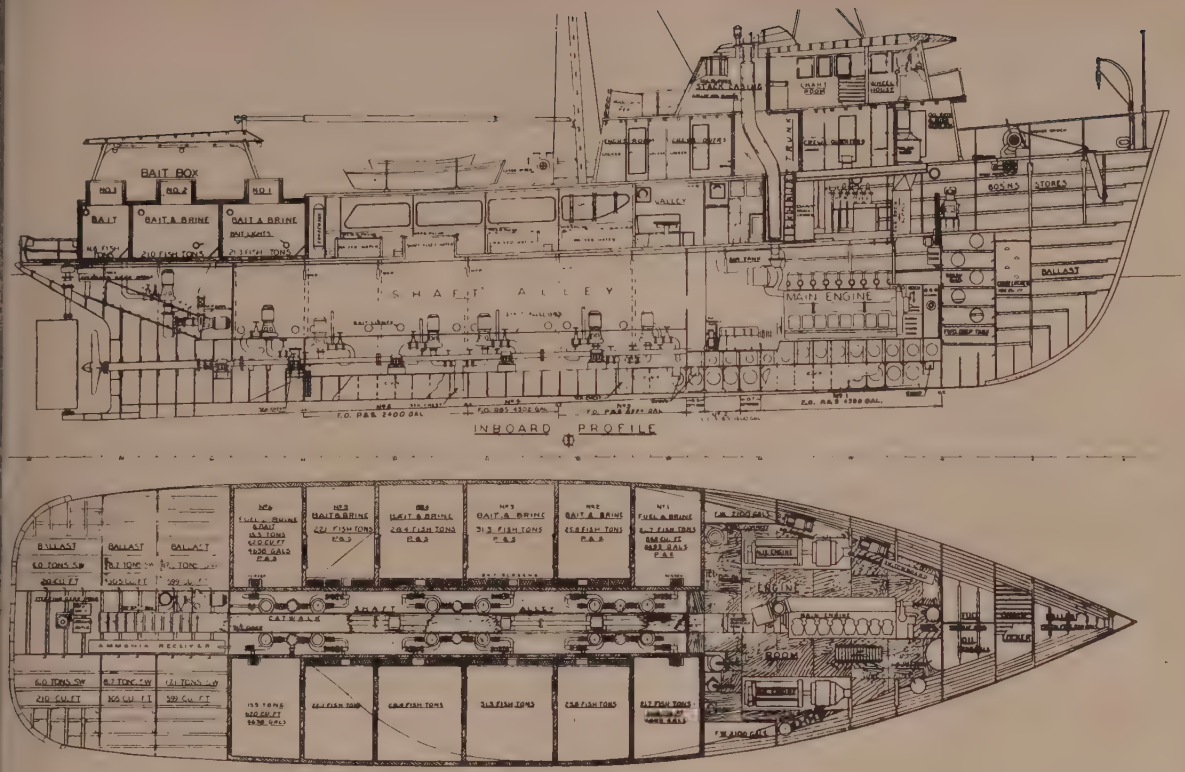
and

BIG *Dividends!*

"NASSCO" Clippers DELIVER

NATIONAL STEEL AND ★ SHIPBUILDING CORPORATION

SAN DIEGO 12, CALIFORNIA



lan and Profile of the two new tuna clippers **Cabrillo** and **Dominator** show the special features of design, arrangement and equipment worked ut for the Soares Brothers by National Steel & Shipbuilding, embodying every proven modern development in the newest clippers in the fleet.

lotation space in the stern and shaft lley to give ample flotation and sta-ility. The rapid rise of the deck line orward of the bait tank gives more reeboard amidships.

The full watertight transverse bulk-ead at the after end of the galley ontributes to stability by eliminating he side alleys with low freeboard and the dangerous wing doors which can flood if the vessel is inclined beyond 20 degrees. A watertight door in this bulkhead gives access to the engine-room through a passage just to starboard of the centerline of the ship. The prime advantage of this arrangement lies in the considerable gain in stability, resulting from the elimination of the two long side alleys, with their relatively low freeboard.

● *COMFORT*—All concerned in the operation of a tuna boat place great emphasis on a vessel's earning capacity. Ease of operation and convenience and comfort for the crew contribute greatly to placing a vessel

A Fair, Flat Wake, the kind a fisherman likes, and a straight course run by her Sperry gyro compass and steering system. On the left, the two Driscoll tenders with their 100-hp. Lathrop engines.

CONGRATULATIONS!

We, at the Sperry Gyroscope Company, are proud to announce the first installation of our new TRIPLE STEERING STAND and new RATE TYPE GYRO PILOT aboard a tuna clipper.

The insight and judgment in selecting our equipment for the CABRILLO and the DOMINATOR goes hand - in - hand with the vision Joseph Soares and George Soares, owners, demonstrated in the building of these $1,000,000 vessels.

It is a pleasure, also to congratulate the National Steel & Shipbuilding Corporation, of San Diego, California, for the design and construction of the CABRILLO and the DOMINATOR, newest tuna clippers to complement the Southern California fishing fleet.

SPERRY GYROSCOPE CO.

GREAT NECK, N. Y.

Pacific Coast Offices:

SAN DIEGO ● LOS ANGELES ● SAN FRANCISCO ● SEATTLE

SPERRY

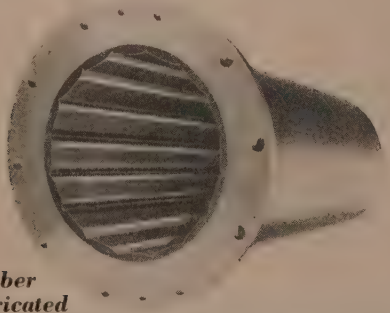
B.F.Goodrich *Cutless* BEARINGS

PROPELLER SHAFT

ON THE PACIFIC COAST

WISE FISHERMEN CHOOSE CUTLESS BEARINGS FOR PERFORMANCE AND ECONOMY

If you fish for a living you know the importance of dependable propeller shaft bearings. The kind that gives years of trouble-free, QUIET operation. The kind that saves shafts and keeps boat out of drydock. That kind is CUTLESS—the soft rubber, water lubricated bearing —the bearing fishermen depend on to keep them fishing.



Soft Rubber Water Lubricated

CUTLESS BEARINGS IMPROVE THE PERFORMANCE OF ANY VESSEL!

Buy them from your favorite Marine Supply House or Ship Repair Yard when you haul out. Large west coast stocks, popular sizes. Factory stock to 10-inch shaft size available overnight by air.

LUCIAN Q. MOFFITT, INC.

AKRON 8, OHIO

Engineers and National Distributors

rom Keel to Truck—a clipper ready for her launching. Note the smooth, fair hull, free from panelling; the round section and the substantial deadrise, lines which make for a stable hull. Her five-bladed Columbia wheel is shown, and her specially-sectioned rudder.

among the top producers of the fleet.

NASSCO's new vessels show the result of engineering in the design of cabins and galley for liveability and comfort, combined with what Joe and George Soares have learned from years of fishing, as descendants of generations of Portuguese fishermen.

In the galley space, to port of the passage, the working area is separated from the mess table area by a serving bar with a dresser top and meat block below it. By this arrangement, there are adequate lockers, drawers and worktop areas with limited wall space. Elimination of the division into two separate rooms permits a free flow of air across the entire area.

Specifications, "Dominator" and "Cabrillo"

Length, overall	127′
Beam, moulded	30′ 6″
Depth, moulded	14′ 6″
Total fish capacity	341 tons
Bait and brine wells under deck	291 tons
Bait boxes above deck	50 tons
Total fuel oil capacity	47,191 gals.
Fresh water storage	4,000 gals.
Lube oil capacity	1,600 gals.
Crew, including captains	15 men

● *VENTILATION* — A powerful blower, located above in the fan room, just aft of the chart room, pulls 1,850 cubic feet of air per minute from the sheltered deck area abaft the galley, through the 16″ portlights in the watertight bulkhead, and across the galley space to the vent intake located over the chef's galley angle range. This arrangement provides a complete air change in the galley every minute and is expected to produce an unusually cool galley.

Ventilation of other areas received special study and improvement in the *Cabrillo* and *Dominator*. In ventilating the engineroom, the principle was followed that, in addition to supplying fresh air, it is necessary to remove excess heat which has been added to the air by the clipper's machinery. To accomplish this, a powerful exhaust blower was installed in the fan room on the bridge deck. This fan draws air up from the engineroom through the stack casing and exhausts it through the after end of the fan room. Fresh air is supplied by a 10,000 cubic feet per minute axial fan located in the net room.

With an eye for comfort and convenience, the boats were designed for the inclusion of the toilet facilities all in one space on the starboard side, and with the shower and washing facilities separated in an area on the port side. Such an arrangement, fishermen agree, provides more privacy and permits the use of more facilities at the same time.

The crow's nest and radar antenna are mounted on a steel tripod atop the pilothouse. Thus, the fisherman on the crow's nest escapes the engine exhaust fumes to which he would be exposed if the crow's nest were mounted on the mast.

● *CORROSION*—In a steel boat the possibility of corrosion is always a matter of paramount consideration. As a builder of many steel vessels, NASSCO has had experience in meeting such problems by incorporating an "in-built" natural resistance to corrosion into all details of the design.

During construction of the hull, great care was exercised to prepare surfaces properly for the anti-corrosive coating. All mill scale, dirt and slag on welds was removed by sand-blasting. The application of the coatings was materially aided by the builder's practice of building the hull in planned sub-assemblies, thus enabling the painters and sand-blasters to reach surfaces which later became inaccessible when the hull was assembled.

Vinyl plastic paints were used for this steel protection, and certain areas subject to abrasion, such as the inside of the bulwarks, were given a zinc spray coating prior to painting.

● *PLASTIC PIPE* — For brine and bait water circulating, the NASSCO

Design Innovation is disclosed above. Note the transverse bulkhead at the after end of the house, full width of the ship, with the only entry a water-tight door near the centerline. This is counted a long advance in seaworthiness. The portlights shown give on the galley. On the right is seen the accessible steel construction, remarkably fine welding, and the Northern anchor windlass manufactured by Tacoma Boat Building Co.

system of individual dual-purpose pumps at each well is used. A total of 15 4" x 5" vertical 7½-hp. Fairbanks-Morse centrifugal pumps were used. There are 12 brine wells in the hold.

While the greatest portion of salt water piping is welded steel, galvanized, a new type of plastic pipe was used for the brine transfer line, main ballast lines and for salt water cooling to the ammonia compressors.

The plastic pipe used is a rigid unplasticized inert polyvinyl chloride (PVC) material. It is believed the use of such piping in salt water lines will reduce fouling from sea growths, and it will of course eliminate electrolytic action and other corrosion in the pipe lines. The plastic of which the pipe is composed will not support combustion.

● *STEEL HULLS* — Longitudinal framing on the *Cabrillo* and *Dominator* works well, for there are a large number of relatively closely spaced transverse bulkheads.

An unusual feature for steel boats is the deep box keel which extends below the hull in a fashion similar to wooden vessels. This keel dampens rolling and aids steering in a following sea. At the stern the box section keel is extended to form a strong and rigid rudder shoe. The sternpost is fabricated of plate and is well streamlined and faired into the hull. A band of extra heavy shellplate on each side extends from the turn of the bilge down to the keel to give strength and rigidity to the entire skeg assembly.

● *THE RUDDER*—Research was a part of the design of the rudder—built to provide good steering in a following sea. It was believed that, if a rudder could be developed which gave the required turning effect at a smaller rudder angle, much less effort and spinning of the steering wheel would be required to hold a true course. Consequently, after an investigation of recent scientific work on the steering of ships and on the subject of airfoils, a new airfoil section was selected which appeared to have the desired characteristics.

The new rudder is considerably thicker, has maximum thickness further aft than usual, and there is also a pronounced hollow to the section near the trailing edge.

● *DECK ARRANGEMENT* — On the raised deck aft two motor tenders and two skiffs are mounted on chocks with space left for two fully assembled bait receivers. The boats and one of the receivers are located on a common radius from the mast so that the elevation of the boom does not have to be changed for making the various lifts.

Fulham Bros. Produce Fish Sticks at Santa Rosa

Fulham Bros. of California, wholly owned subsidiary of Fulham Bros., Boston, Mass., has opened at Santa Rosa, Calif., what is said to be one of the most modern fish stick plants in the country, according to John N. Fulham, president of both companies.

Vice-president and general manager of Fulham Bros. of California is Gay Lewis, who has represented the company on the coast for some time, and who used to be stationed in Los Angeles, but who now makes his headquarters in Santa Rosa.

The new plant is housed in a modern building, with 14,000 sq. ft. of space. Fish come from the company's own production points on the east coast. Cooker, cooler, and conveying equipment in the plant are by Doughnut Corp. of America. Breading and batter materials are made to Fulham's own formula.

The plant started operations March 8, and was expected to be on a two-shift basis shortly, producing 24,000 8-oz. packages of "Four Fishermen" brand fish sticks per shift. The raw material is kept in storage in leased facilities, and the finished sticks are frozen at the same ice plant in Santa Rosa.

Japanese Inspection Of Seafood Exports

Inspection of Japanese frozen and canned seafoods, vitamin oils, etc., for export since the war has been carried on mainly through autonomous action of the respective industries instead of the compulsory pre-war control through state agencies; but these items under a 1948 law definitely requiring inspection by either government or *registered* private agencies. It was announced in February that such an officially registered organization for the products mentioned would be established and commence functioning by April 1, and hope was expressed that this measure would greatly reduce the number of complaints.

Packed
for protection...
Wrapped
for sales!

Complete Frozen Sea Food Packaging by MARATHON

At Marathon, you'll find the *exactly-right* carton for your sea-food product. The finest quality and construction anywhere . . . to keep your foods at their appetizing best from plant to customer's kitchen. And into the glamorous Tyton or Glamacote Overwraps Marathon's research and merchandising experts and artists have poured their combined skills to produce a brilliance in packaging that STOPS SHOPPERS . . . arouses their desire . . . and SELLS YOUR BRAND!

Ask the Man from Marathon
for complete information and samples, or write Marathon Corporation, Dept. 622, Menasha, Wisconsin.

MARATHON
SELL BRANDS · PROTECT PRODUCTS · SPEED PRODUCTION
PACKAGES

TARIFF & STICKS

N.F.I. Convention Will Have Twin Topics No. 1

• There will be two Topics No. 1 at the National Fisheries Institute convention in Chicago April 24-7 — *Tariff* and *Fish Sticks.*

No matter what's on the program, nor the hour of the day or night, it's a fair certainty that *Tariff* and *Sticks* will be what they're talking about.

The acute interest in these subjects in the fish business today, plus the generally evident pleasurable anticipation with which Pacific Coast N.F.I. members are looking forward to the convention in New Orleans, leads to forecasts of attendance and importance which will make the meeting specially notable.

• *STANDARDS PROPOSED*— Early in February the N.F.I. Fish Stick Committee, which was formed at the convention last year, requested the U.S. Fish and Wildlife Service to issue voluntary stands for fish sticks, and to base them upon proposals prepared by the committee.

The proposals for fish stick standards were prepared by the committee as result of a long series of meetings which examined the matter carefully and weighed the many factors involved.

The standards broadly provide: (a) product description and grades; (b) Specifications for product grades; (c) tolerances and scoring methods; (d) procedures for inspection and scoring.

• *WHAT ARE STICKS?*—The proposed description of the product is perhaps the most important portion of the recommended standards, and is given in these words:

"Frozen fried fish sticks are prepared from uniformly rectangular shaped portions of fish flesh *cut or sawed from frozen blocks* of edible fish fillets, essentially *free from* skin, bone and *any adulterant;* are coated with batter and/or breading; are cooked by frying in an edible cooking oil or fat; and quick frozen and maintained at temperatures necessary for the preservation of the product. All sticks in an individual lot are prepared from the flesh of only one species of fish, and the common name of the species is carried in the ingredient legend. The number of sticks and the net weight are displayed prominently on the front panel of the package. The sticks have the average weight of not less than 2/3 oz. and not more than 1½ oz. per stick, with due allowance for normal processing variations. The largest dimension of each stick is at least three times the next largest dimension."

(*Editor's Note*—The several words italicized above are of special interest to some Pacific operators, in that they would exclude fish sticks formed by extrusion, after the process developed on the Pacific Coast and used there to some extent. It should also be noted that the proposals call for weight of individual sticks not exceeding 1½ oz., where it has been the practice of some Pacific operators to cut their sticks to 2 oz. size.)

• *HOW MUCH BREADING?*— While the matter of percentage of breading is not as acute a problem in fish sticks as in breaded shrimp, the thickness and character of the coating unquestionably is a leading factor in product quality.

The proposed standards provide that product grades shall be determined by a system of scoring, with classifications and the number of points which may be ascribed to each as follows:

Appearance	20
Odor and flavor	30
Character	20
Absence of defects	30

Average weight of the coating (batter and/or breading, plus the oil absorbed during cooking) shown in percentage of the weight of the whole stick prior to heating, is as follows for the three "Character" grades:

(a) *"Very good character"*, not more than 37%;

(b) *"Good character"*, not less than 40%;

(c) *"Fairly good character"*, less than 45%.

The standards do not provide a character grade for breading which averages more than 45% of the weight of the sticks, but it is prescribed that such sticks shall not receive more than 13 points for character, and may receive none.

• *WHAT ACTION?* It is hardly anticipated that the Fish and Wildlife Service will act on the request to issue the standards before the N.F.I. convention. Rather it is to be anticipated that the committee's action in submitting the proposals to the Service will bring the matter definitely to a head and will insure it of the widest discussion at the convention.

Japan Will Insist On Three-Mile Limit

Japan will insist on recognition of the three-mile limit principle for territorial waters in its prospective negotiations with Soviet Russia, according to our Tokyo correspondent, despite the Soviets' claim of 12-mile jurisdiction.

King Crab Sales Jump Under Lenten Stimulus

Highly satisfactory sales of King crab occurred during the early part of Lent, according to Lowell Wakefield, president of Wakefield's Deep Sea Trawlers, Inc., who returned to his Seattle headquarters early in March from an eastern trip.

Death of Gregory Legaz

Gregory Legaz, head of the McCallum-Legaz Fish Co., Seattle, and the Coast Packing Co., Ltd., died Feb. 13 after a long illness. He was 69 years of age.

Mr. Legaz came to New York in 1900 from what was then Austria, and to Seattle in 1909, engaging in various fishery activities. Soon after World War I he joined with the late A. J. McCallum in establishing the McCallum-Legaz wholesale fish business, in which Mr. McCallum's son, John McCallum, has been a partner since his father's death in 1950.

Mr. Legaz is survived by his widow, Mrs. Minnie Legaz; two daughters, Mrs. Henry Bernier and Miss Virginia Legaz, and three grandchildren.

ANNUAL NEW GEAR NUMBER

PACIFIC FISHERMAN'S NEWS

APRIL 1955

Tuna Industry Confused, Without Price Contract, And 8,000 Tons on Hand

The tuna industry was in a confused state when this issue of PFN went to press. The purse seine fleet, which had hoped to negotiate a price for netted tuna, found itself without a price contract. Boats which had left early in the year were docked in port, but no buyers.

In San Diego the bait fleet in its negotiations with the canneries had come to no conclusion. The American Tunaboat Association estimated that about 8,000 tons of tuna were being held in the holds of numerous tuna boats in port.

About 1200 tons of tuna were lost to the canneries when the *Toni B* and the *Sea Lark*, freezer ships, sank early in March, with approximately 600 tons of tuna per boat. There was no loss of life.

Refrigerated tuna aboard the freezership *Spicewood* was reported in March on its way to Puerto Rico for National Canning Company processing.

Trouble added up to trouble in February when the government of Peru seized seven United States purse seiners 18 miles from the Peruvian coast, it was reported. The vessels were taken to Talara, where hearings were conducted. Two of the boats were released; and later the other five, following the payment of an assessment.

In the last week of February, four bait boats and four purse seiners arrived in San Pedro with tuna; in San Diego for a similar period, one clipper and no purse seiners came to port.

Nylon Leader Favored

From Wm. P. Wise, Forest Grove, Ore., comes the report that "We find that the nylon leader instead of the old cotton leader on steel is more satisfactory. Believe it has so much less resistance in the water and will hook fish deeper or more solidly. It also gets your steel line fish straighter down and gives line in trolling a much better action."

Puget Seiner Burns

Holy Cross, a 65′ Tacoma purse seiner owned by Jack Saletic, was destroyed by fire in Whidbey Island waters late in November.

Rod Emigh and the skipper were the only persons aboard. They took to the skiff shortly before the vessel exploded and were picked up by the Coast Guard.

New Chinook Troller Named "Wanderlust"

W. L. "Mick" Powell of Chinook, Wash., is having a new 38′ troller built for him. She is named *Wanderlust* and, due to be in the water by April 1, will be ready for early salmon fishing out of the Columbia River.

Mr. Powell formerly owned the troller *Patty Lee*, which he has sold to George Chevalier of Chinook.

Morro Bay Improvement Urgently Needed

The Morro Bay Grange, with support of local fishermen, has been agitating for much-needed harbor improvements—repairs to the breakwater, which is rapidly becoming so broken as to offer no protection, and dredging of the channels to the original depth and width.

Drum Seining Tried-Out On B. C. Herring

Drum seining was introduced in the great British Columbia herring fishery during the 1954-5 season for the first time. Whether this form of fishing will find a permanent place in herring operations—or will even displace the table seine — was very much of an open question among fishermen and operators at the end of the season.

Opinion among fishermen at that time seemed to be that the drum seiners as presently equipped and operated would have trouble competing with the large table seiners, which carry longer and deeper seines than the present fleet of drummers are able to manage.

There were 90 purse seiners engaged in the British Columbia herring fishery during the 1954-5 season, the fleet being larger than had ever before engaged in this fishery.

Union Co-Op Re-Elects Officers

C. O. Moberg, long president of the Union Fisherman's Co-operative Packing Co., Astoria, was re-elected for another term at the company's annual meeting in late February. Mr. Moberg has been a member of the company's directorate for 36 years.

All other officers were also re-elected: Mike Haggren and Waino Suti, first and second vice-presidents, and Harold Niemi, secretary; and Rolf Estrem was re-elected manager.

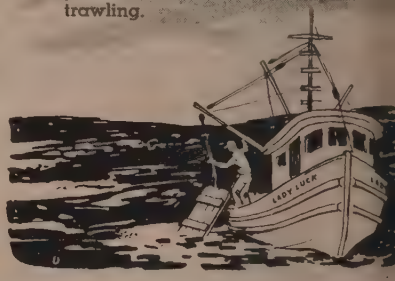
New B. C. Seiner Mounts Murphy Diesel

A new 58′ seiner, sister of *Miss Georgina*, launched a few months ago, has been built by Matsumoto Shipyards, Deep Cove, B. C., for the B. C. Packers fleet and it will be operated by John Dick of Quathiaski Cove. The vessel is powered by a 190-hp. Murphy diesel.

Log of the **"LADY LUCK"** . . . A True Story

Time: 0530 The "Lady Luck" leaves for shrimp grounds off Sabine Pass. Winds from southeast with strong tide. Snow-Nabstedt gear purring like a kitten.

Time: 0700 Try net shows good indication of shrimp at three fathom level. Large trawl and boards put overboard. Vessel ready for trawling.



Time: 0720 Trawler's automatic pilot set for southerly direction against tide. Engine operating at 1300 rpm. Snow-Nabstedt gear running efficiently, **maintaining trawling speed despite strong sea.**

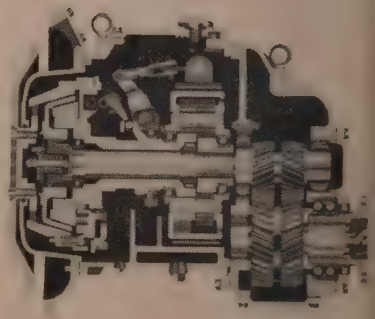
Time: 1100 Trawl is pulled aboard. Four barrels of large white shrimp are secured in the hold. A mighty good catch!

Thanks to **SNOW-NABSTEDT GEARS**

"I'm very satisfied with the operation of my Snow-Nabstedt reverse and reduction gears," says Ernest "Pete" Petterson of Port Arthur, Texas, captain and owner of the 42-foot shrimp trawler "Lady Luck". "They offer long service without troublesome and costly breakdowns".

. . . the shrimp trawler *"Lady Luck"*, powered by a 110 H.P. Diesel coupled with a S-N Manually operated 2:1 Reduction Gear, has completed a highly profitable trip.

Fishing men the world over will tell you that you can't beat S-N Marine Gears for rugged construction, smooth power transmission and economical operation . . . thanks to S-N's exclusive herringbone gearing, wet type cone clutch and balanced reverse gear train.



S-N Marine Gears are designed specifically for Marine Engines 4 to 1000 H.P. with a wide range of reduction gear ratios.

S-N MANUAL
HYDRAULIC
AIR-OPERATED GEARS

SNOW-NABSTEDT

Transmission Engineers

FOR NEARLY HALF A CENTURY

"MAKERS OF JOE'S GEARS"

THE SNOW-NABSTEDT GEAR CORP., HAMDEN, CONN.

Pacific Fisherman's NEWS
1955 Volume 53 Number 5

Witt Gilbert .....Editor
en McCauley .....Associate Editor
rles L. Shaw.....Canadian Editor
art F. Leete.....No. Calif. Editor
W. Ponsford.....Southwest Mgr.
hard N. Crosby.....Eastern Mgr.

A Miller Freeman Publication

ler Freeman.....President
wrence K. Smith.....Vice President
lliam B. Freeman....Vice President
ler Freeman, Jr.... Secy.-Treasurer

Publication Office
S. W. Third Ave., Portland, Ore.
BEacon 6348

Editorial & Advertising Offices
71 Columbia St., Seattle 4, Wash.
MAin 1626

DISTRICT OFFICES
Lexington Ave.....New York 17, N. Y.
MUrray Hill 3-9294
1 Howard St. (Rm. 308)...Chicago 26, Ill.
ROgers Park 4-3420
Pender St. West.....Vancouver, B. C.
MArine 7287
Witmer St.....Los Angeles 17, Calif.
DUnkirk 9-1112
Second St.....San Francisco 5, Calif.
GArfield 1-5887
No. Avalon Blvd.....Wilmington, Calif.
TErminal 4-4538

CORRESPONDENTS
tchikan .....Gene Brice
Strait.....Mrs. Vi Haynes
ka.....Myrth B. Sarvela
lingham.....Mrs. Pauline Constanti
ss Landing.....Mrs. Lillian B. Woodward
ays Harbor.....Ade Fredericksen
toria.....Mrs. Elsa Auvil
reka.....F. F. Flaherty

HANGE OF ADDRESS: Please send notice change of address to 121 Second St., San ancisco 5, Calif., as early as possible, and lude both old and new addresses, plus zone mber at new address.

DVERTISING: Complete plates only should sent to Pacific Fisherman, 235 N. W. Park e., Portland 9, Ore. . . . Advertising copy d cuts, instructions, all insertion orders should sent to the Seattle office.

Trawl Gear for Herring Tested in British Columbia

A profitable summertime herring fishery off the west coast of Vancouver Island and elsewhere may be developed as a result of experiments, so far successful, with mid-water trawling gear.

A group of practical fishermen have been working in co-operation with the Pacific Biological Station and the Canadian Fisheries Department in designing and operating special trawl gear, the project being financed by the Industrial Development Fund of the Ottawa government.

The idea was conceived by groundfish trawlers when a decline in the market led them to attempt herring operations, previously conducted almost entirely with purse seines.

Development of effective mid-water fishing would serve two important purposes: 1. Make it possible to use trawlers for the herring fishery; 2. Enable fishermen to catch herring at depths not normally reached by seines and at a time of year when seining is not feasible or when the herring fishery is usually inactive.

Heading the experiment has been Dr. Keith Ketchen of the Pacific Biological Station staff at Departure Bay, with Ed Barraclough, also of the station staff, directly in charge. Wesley Johnson, who may be regarded as one of the pioneers of the mid-water trawling development, was engaged by the station a year ago to undertake practical work in connection with the experiment, and he set up a committee of fishermen composed of Ray Prince, Jim Wingate and L. Hurley, all of whom have been actively at work on the project.

The 55′ otter trawler *Sea Pride II* was chartered from Blaine Myers & Co. to test the special gear in waters of the lower east coast area of the Gulf of Georgia. Norman Sigmund is skipper.

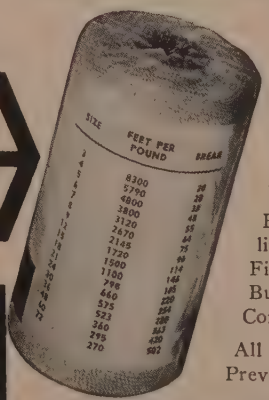
The preliminary survey on which a report will be prepared this spring, and which will serve as a basis for further experimentation, was completed in mid-February, with highly favorable results. Catches were made with the mid-water trawling gear up to 30 tons of herring per drag at depths of from 20 to 40 fathoms, considerably below the normal reach of purse seines.

The gear used differs considerably from the conventional. The net is almost entirely of nylon and extremely light. The mouth of the trawl is 40′ deep and 30′ wide, making an opening space of 1200 square feet.

Sea Pride II was out for five weeks, much of the time being occupied with adjusting the net and determining the

Another
BROWNELL EXTRA
Nylon Filament
SEINE TWINE TABLE

When buying Nylon Seine Twine, look for this Brownie Trade mark. It's your assurance that it was made especially for you of 100% DuPont Filament Nylon. Heat-set to prevent untwisting.



Brownell, the largest manufacturer of Nylon Seine Twine, takes another step forward by introducing on each package of Brownie twine a complete table listing the feet per pound, size, and breaking point.

Brownell also makes a complete line of Hot-Stretched Bonded Filament Nylon for Trot Lines. Buoy Lines, Trawl Lines, etc. Also Combination and Spun Nylons.

All our Nylons are Processed to Prevent Excessive Untwisting.

PACIFIC COAST DISTRIBUTOR FOR BROWNELL NYLON PRODUCTS
CONSOLIDATED NET & TWINE CO., INC.
Fisherman's Terminal Phone: ALder 6387 Seattle 99, Wash.

BROWNELL & CO., INC.
MOODUS, CONNECTICUT

"My Shark has bark and plenty of bites,"

says Captain Alexander Ott, well-known Miami, Florida skipper and sports fisherman.

Shark is a fisherman's dream if ever there was one . . . forty-two feet, fast, maneuverable, commodious (sleeps six plus crew), powered by three engines. Captain Ott writes:

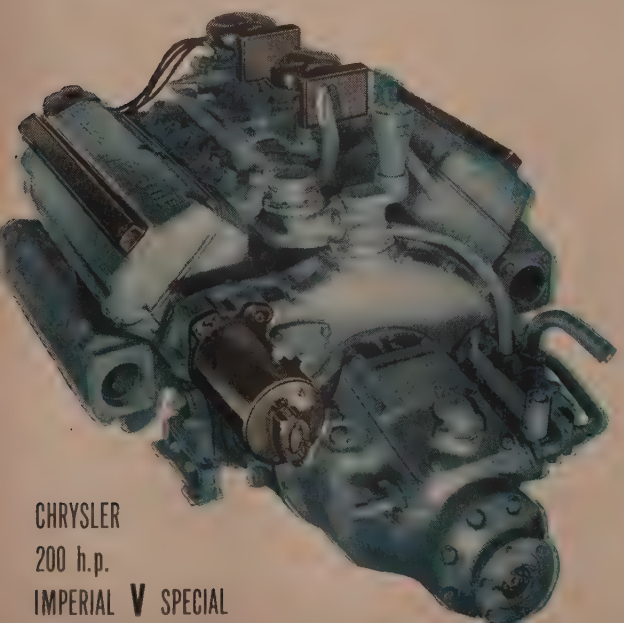
"Since installing Chrysler Imperials in January 1954, we've averaged 25 m.p.h. going to and from fishing grounds. We've no 'busy season'—they're all busy, year 'round . . . off Miami, the Florida Keys and the Bahamas. The Chrysler Imperial, without a doubt, is the finest marine engine ever built."

INSTANT response to starter and accelerator, economical operation, dependability . . . what's most important to you in a marine engine? If you're like Chrysler Marine Engine owners and operators, you want them all. They *get* them all . . . you can too. See your Chrysler Marine Engine Dealer, or write us for 1955 catalog on Chrysler Marine Engines, *carefree* marine engines 95 to 200 h.p. ***Dept. 144, Marine Engine Division, Chrysler Corporation, Trenton, Michigan.***

America's No. 1 Marine Engine

gives you these so-called "extras" at NO additional cost:

STORAGE BATTERY • SHIFTING LEVER • RIGHT OR LEFT ROTATION ENGINES • FULL-FLOW OIL FILTER



CHRYSLER
200 h.p.
IMPERIAL V SPECIAL

SHARK AGAINST MIAMI SKYLINE
Outward bound, **Shark** appears a formidable foe of any deep-sea fish. 42 feet long, **Shark** is equipped with almost every conceivable comfort and safety feature . . . stays away for weeks at a time, fishing one exciting area after another.

KING MACKEREL COMES ABOARD OFF MIAMI
Captain Ott writes that **Shark's** Chrysler Imperial V Special Engines give her all the speed she can carry, yet are remarkably economical to operate.

CHRYSLER

MARINE ENGINE DIVISION • CHRYSLER CORPORATION • TRENTON, MICHIGAN

per depths at which to operate. The pose was to fish under as varied ditions as possible. The web had " wing, tapering down to a 1¼" l-end.

The experiment is being followed h particular interest by fishermen ose experience in the past has been efly in dragging. A year ago fish-nen in Prince Rupert as well as in thern British Columbia tried to de- e methods of their own that would rk satisfactorily; and their first at- npts, while not entirely successful, licated that something worth while uld probably be worked out if tac- d systematically and with greater hnical resources.

Full potential of the mid-water gear this district will not be realized until effective test can be made during e coming summer. Much has yet to learned concerning the location, abundance and condition of herring at that time of year. Somewhat similar procedure is understood to have been followed in the past in Norwegian and Atlantic east coast waters.

Among other comparatively new developments now finding favor in the British Columbia industry is the use of plastic floats and braided lead-lines which, according to fishermen who have tried them, do not hang up in the netting as much as in the case of cotton lines.

TONI B Founders In Caribbean

Toni B, Capt. John Bez, a member of the Nick Bez freezership fleet, known in tuna and salmon fisheries from the Equator to Bristol Bay, foundered Feb. 26 in a heavy storm near the San Blas Islands, northeast of Panama. Lost with her was 600 tons of tuna she was carrying from the South American west coast to a cannery in Puerto Rico. Her crew of ten, including Capt. Bez, were rescued by a U. S. Navy patrol boat after being spotted by planes, having spent 7 hours in a lifeboat. The cargo was covered by insurance, and the vessel was partially covered.

The *Toni B*, which operated as an Alaska salmon freezership in 1951 and '52, had been operating on the Pacific side, and a short time before had been seized by the Peruvian government under its claim of 200-mile offshore jurisdiction, and released after payment of a heavy fine. She was a converted 639-ton Navy tug.

In a phone message from Panama, Capt. Bez told his father, Nick, in Seattle that the vessel started leaking faster than her powerful pumps could remove the water, and sank less than ten minutes after she was abandoned.

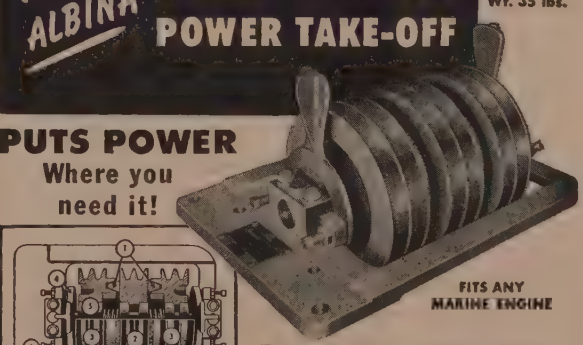
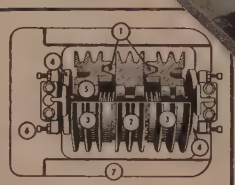
'Sea Lark' Sinks

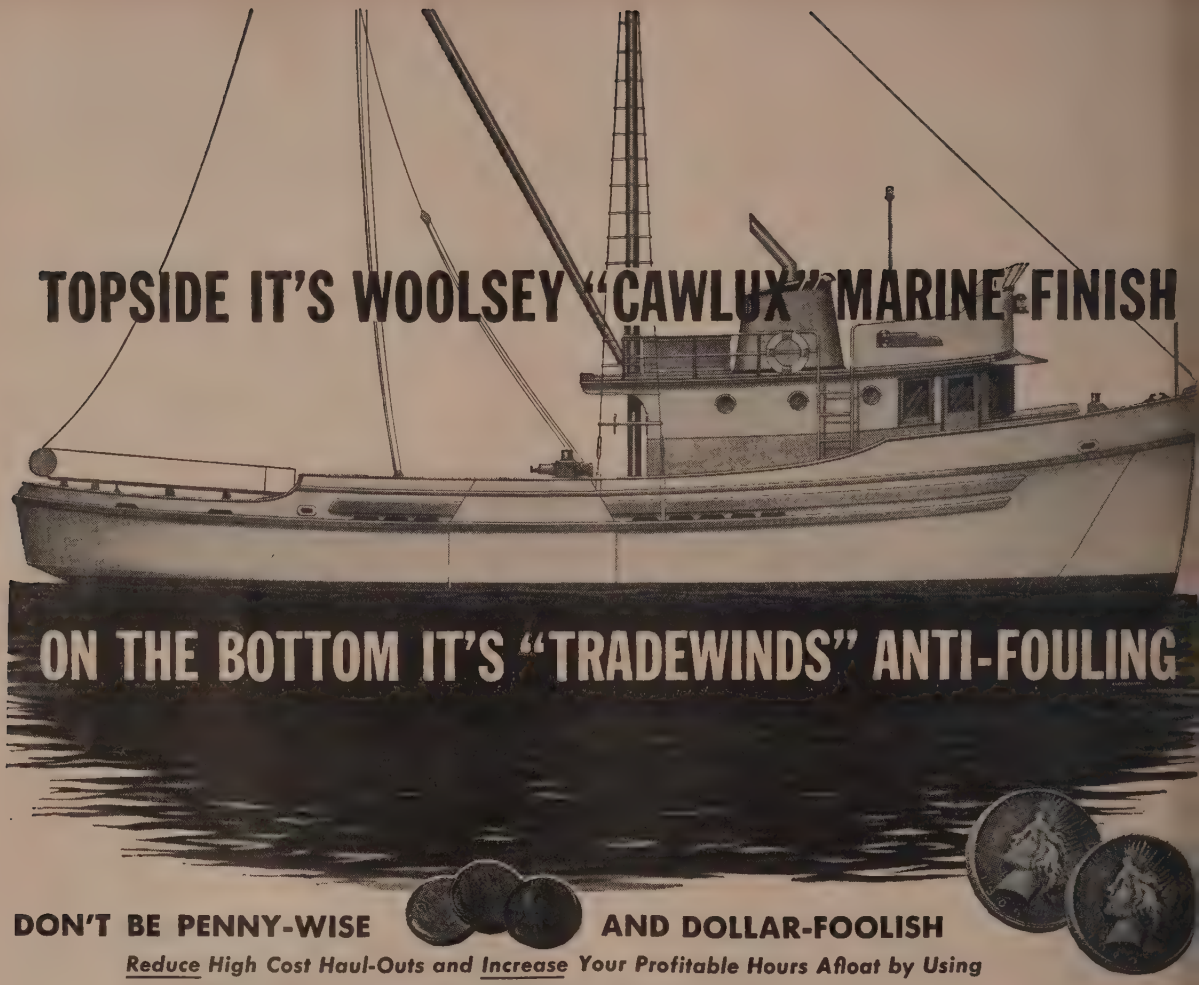
The 165-ft. freezership *Sea Lark*, rated as the world's largest tuna clipper, sank March 3, 400 miles south of Panama, with some 490 tons of tuna en route from the Pacific side to a Puerto Rico cannery. All hands, including Capt. Fernando Medina and Hugh Latimer, engineer, were rescued and taken to a Colombian port by the Ecuadorean vessel.

The *Sea Lark*, which spent several seasons in the Bristol Bay salmon trade a few years ago, was owned at the time of her loss by Pacific Clippers, Inc., and was being operated out of Peru as a mother-ship under management of the National Marine Terminal Corp., San Diego.

KETTENBURG
Distributor--Sales--Service--Parts
Chrysler Marine Engines
Builders of 14', 16' & 18' Tuna Tenders - - Chrysler -Powered
KETTENBURG'S famous "K-38" Albacore and Combinations
KETTENBURG BOAT WORKS
Box 65, Point Loma, San Diego 6

BIG NEWS THIS YEAR FOR THE PURSE SEINER
Is the New
NORTHERN TOW LINE WINCH
AMPLE CAPACITY—LIGHT WEIGHT
100% GALVANIZED—COMPACT
Are You Repowering This Year?
Let us figure with you for a fast 100% engineered economical job.
Complete engineering department and machine shop. 10 & 35 Ton cranes, railway spur trackage.
TACOMA BOATBUILDING CO., INC.
132 Sitcum Waterway Phone: MArket 8138
Tacoma 2, Washington
Designers and Builders of Wood and Steel Commercial and Fishing Vessels Since 1930
ARNE STROM, *Owner*

The New ALBINA DIRECT CONTROL POWER TAKE-OFF
Double Ball Model
Wt. 35 lbs.
PUTS POWER Where you need it!

FITS ANY MARINE ENGINE

1. Cone clutches.
2. Pulley driven from engine crankshaft.
3. Clutch pulley (independently controlled).
4. Control Levers
5. Sealed ball bearings (no lubrication necessary).
6. Adjusting screws.
7. Mounting frame.
The manually operated Albina Power Take-Off now has die cast operating levers of Aluminum-Zinc copper alloy with a stainless steel wearing strip cast as an integral part. There are also die cast aluminum alloy sheaves and die cast aluminum alloy shaft standards. Full molded friction linings from permanent molds. The shaft is stainless steel. SKF bearings are permanently lubricated and sealed.
Write for illustrated descriptive folder.
ALBINA ENGINE & MACHINE WKS.
2100 N. Albina Ave. Portland, Oregon

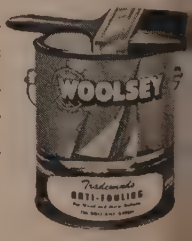


DON'T BE PENNY-WISE AND DOLLAR-FOOLISH

***Reduce** High Cost Haul-Outs and **Increase** Your Profitable Hours Afloat by Using Higher Quality, Longer Lasting Woolsey Marine Paints on Your Boat*

"CAWLUX" FACTS—"Cawlux" Marine Finish withstands continued exposure to salt, hot sun, scrubbing, hard wear...every punishment a fishing boat must undergo...far better than ordinary paints. This is because "Cawlux" is made with a special alkyd binder that "imprisons" and protects the world's finest pigments in a tough, impermeable, flexible film. Yet "Cawlux" costs but slightly more per gallon! On the hull, trim, decks, cabin, spars, and other topside surfaces, "Cawlux" looks far better far longer than the average marine paint. "Cawlux" Whites come in Gloss, Semi-Gloss and Semi-Flat. Also available in a wide range of sea-tested colors. *It's false economy to use anything less than the best.* Try Woolsey "Cawlux" this season...and you'll agree!

"TRADEWINDS" FACTS—This highly toxic anti-fouling paint provides *season-long* freedom from barnacles, borers, grass and other attachments! For wood or steel bottoms, "Tradewinds" gives a smooth, tough finish in either Rich Red or Brilliant Green. May be applied over new wood or old paint in good condition, recoated in 3 hours, launched after 4 hours.



Serving at Sea Since 1853

WOOLSEY MARINE PAINTS

C. A. WOOLSEY PAINT & COLOR CO. INC. • 229 E. 42nd St., New York 1

Chiles Boat Co., 11333 Atlantic Blvd., Lynwood, California. Oregon Marine Supply Company, 235 S.W. First Avenue, Portland, Oregon. Pacific Marine Supply Company, 1217-1223 Western Ave., Seattle, Washington. San Diego Marine Hardware, 1520 Bay Street, San Diego, California. Weeks-Howe-Emerson Company, 645 Howard St., San Francisco 5, California.

How to Save Fish and Work: Stow Them in Chilled Sea Water

Use of refrigerated sea water to d fish in good condition prior to ocessing has been successfully dem- strated in canneries and on trollers British Columbia, and it is planned carry out experiments along similar es in packers and seiners.

Although the same principle has en applied in Alaska by Libby, Mc- eil & Libby and by shrimp fishermen Louisiana, it is believed that the ts carried out in British Columbia ong this line have been more ex- nsive and diversified than anywhere e.

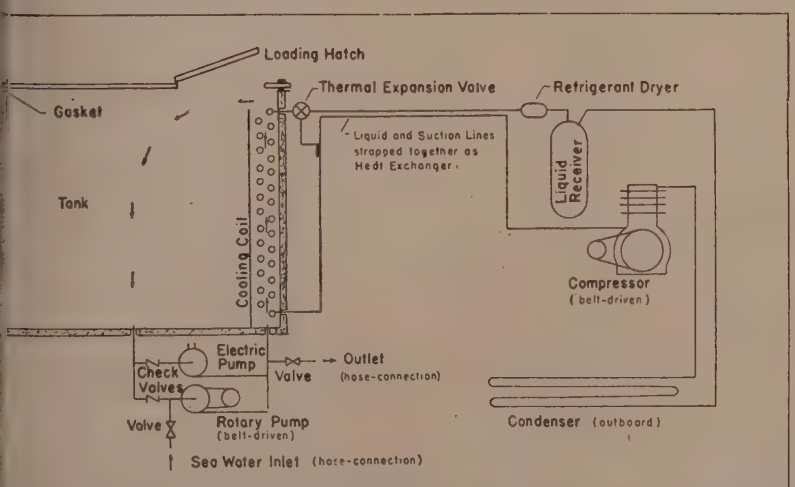
Even now, the application of the frigerated sea water idea has yet to ceive a full-scale commercial test cept on trollers, although this will obably materialize during the next w months, and the industry is fol- wing developments with consider- le interest, since such demonstra- ns may have a somewhat revolu- nary potential in their over-all fect.

FISHERMEN PLEASED—Fisher- en operating trollers have been high- satisfied with the use of refriger- ed sea water in compact metal-lined nks, which frees them from the ecessity of depending on shore sta- ons for ice. The problem of ice han- ling has been entirely eliminated for em, and they have discovered that ey can hold their catch in the tanks n board their trollers for ten or eleven days without deterioration.

The troller tanks have a capacity of from 700 to 2500 lbs. of fish, but packers equipped with similar storage will accommodate 40,000 lbs. or more, and the packer tests will be of special interest since fish subject to the refrigerated water treatment would not classify as "processed fish." This is important in British Columbia, because provincial fisheries legislation prohibits the processing of fish on vessels other than those which actually were responsible for the catch.

This legislative provision has the double effect, in intent, of preventing the operation of offshore factory ships and of protecting the substantial investment by the industry in shore plants. The government has ruled that use of refrigerated water at sea does not constitute processing as defined by the law.

Chilled Sea Water tank on the troller **Phantom II** is shown here. The oblong frame is of plywood and the top section of the cooling coils can be seen near the surface of the tank, which has a 700-lb. capacity. Tanks on other trollers similarly equipped have a capacity of 2500 lbs., and in some cases the tanks are of aluminum or enameled steel construction.



Schematic Diagram of refrigerated sea-water equipment as installed in some British Columbia trollers. It is planned to continue experiments with the same type of refrigeration on packers and seiners.

● *USE IN CANNERY*—As important as the use of this principle on fishing vessels is the application to processing plants, such as canneries and salteries. At Francis Millerd & Co.'s Great Northern cannery in West Vancouver, tanks 9′ x 19′ with a depth of 3½′ have been built to hold fish, and this installation has performed well. At most canneries, the storage of fish overnight or through the weekend is a difficult problem, and this is particularly in evidence at the Great Northern plant which has no facilities for making ice. Refrigerated sea water has been a convenient solution there to the problem of handling a big volume of fish in a minimum of time, apart from minimizing storage troubles.

If and when refrigerated water is used in packers or seiners, some ingenuity will be required to develop a method for unloading. The fish are usually in pretty tight formation in the tanks, and a conventional brailing type of unloader would hardly be feasible. However, present thinking is

toward the adoption of a conveyer system which would provide for manual loading from the tank onto automatic conveyance up to the floor of the processing plant.

● *A TROLLER'S OUTFIT* — The most thorough demonstration on a troller so far carried out has been on Robert Gregg's *Phantom II,* which has been operating off the north coast of Vancouver Island and in Loughborough Inlet. The tank originally installed was of plywood construction, with cooling coils mounted on all four sides; refrigeration being supplied by a ½ h.p. Freon-12 compressor, belt-driven from the boat's main engine. Refrigerant condensing was accomplished by outboard condenser tubes on the ship's side. Subsequently a second tank was built on *Phantom II,* and adequate circulation was provided by the use of two circulating pumps, one a rotary type driven by the boat's engine, the other a small electric centrifugal as used on the first tank.

This setup made it possible to maintain the desired low temperatures during engine shutdowns by using the electric pump; the larger rotary pump providing adequate circulation for rapidly chilling the mass of water at the start of the operations and for quickly cooling the fish after catching. This second tank is of sea-water-resistant aluminum (57S) and it has been superior to the plywood from the standpoint of cleanliness and lightness, although probably costlier. Use of other metals might introduce the corrosion factor.

However, plywood, steel and aluminum have all been used with fairly good results on various trollers, the plywood and steel tanks being painted with a non-toxic asphalt enamel which gives a surface that can be easily cleaned. Plywood tanks have been found rather hard to keep watertight, however, even though they have an advantage in being free from corrosion or electrolytic action.

● *TECHNICAL DETAILS* — According to J. S. M. Harrison and S. W. Roach, who have done most of the experimental and research work in this connection for the Pacific Fisheries Experimental Station, Vancouver, the desirable sizing of compressors appears to be about 1 h.p. to 3000 lbs. of fish-holding capacity. This ratio will cool the initial load of sea water from 50° F. to 30° F. in about ten hours. The initial cooling is the severest load on the compressor. The outside tube surface area of outboard condensers should be about 3 square feet per horsepower of compressor rating. Water circulation of about 15 gallons per minute per ton of fish-holding capacity is required for initial cooling of the fish.

"There are no apparent problems insofar as quality of fish is concerned," according to these authorities. "The appearance of fish held in tanks is much better than in ice, since there is no crushing effect from the fish and ice above. The labor of icing and the hazard of ice not lasting the trip are eliminated."

Both on the trollers and at the Great Northern plant, aureomycin is mixed with the sea water to be chilled, and this has acted as an added factor in maintaining the freshness of the fish. Salmon in the round, and also split for smoking, has been successfully treated at Great Northern, where a slight fading in color was noted in the split fish —not surprising in view of the exposure of the flesh.

● *FOR HERRING*—In addition to the original tank at Great Northern, which has capacity for 16 tons of fish, a second installation was put in there some time ago in connection with the salt herring operation. The tank was used for storing fish saturated in 100% brine instead of salt. When the market for this product declined the operation was discontinued, but it was revived when the market improved last winter and some modifications in the pumping of saturated brine into the tank were adopted. The brine was made up to strength in an outside mixing tank with powdered salt, and pumped back into the main tank. Originally, the mixture was pumped in at the top of the tank, but the newer technique has been to pump it into the bottom.

This system replaces the old procedure of putting crushed salt on top of the fish loaded into the tank and letting it dissolve and sink towards the bottom. This was relatively satisfactory when the fish was not to be held in storage long, but the newer method made it possible to keep the fish in good condition for a considerably greater period.

The cooling coil at Great Northern consists of four vertical banks, each consisting of six horizontals with 11 runs of 1¼" pipe. The cooling coil is contained by watertight plywood bulkhead running the length of the tank. A 2" electrical centrifugal circulating pump circulates the sea water. Refrigeration is effected by a 10-h.p. ammonia compressor.

Gillnets and Gillnetters Meeting New Challenges

Gillnetter development can be counted as an outstanding element in the field of new fishing gear for Puget Sound waters, and indeed for a number of points in Alaska as well.

Persons closest to the picture estimate that there will be 600 American gillnetters — possibly more — fishing out of Puget Sound ports this summer, despite the prospect for a light Sockeye run.

Part of the reason for this great gain in gear has been the improved returns from this form of fishing as result of improvements in nets and the means of handling them. Nylon gillnetting has come into almost universal use on Puget Sound and in the Fraser River Sockeye fishery, and this web has undoubtedly played an important part in the increasing popularity of the small boats.

Moreover, the investment in a gillnetter is not so great but what many individuals can swing it; and one man can maintain as well as operate a gillnetter whose share is all his.

● The Canadians have been taking their gillnetters to sea the past two seasons with profitable results, and it would be stupid to feel that the American gillnetters won't give this game try as well.

Some of the American fleet are capable of ocean fishing, but the general belief is that ocean gillnetting will require the construction of a lot of new boats if it is to become an important element in this form of fishing.

Out at sea there are as yet no limitations upon length and depths of nets. This *could* come, of course, if the Sockeye commission finds it necessary to limit the size of gear in order to meet its mandate to (1) provide spawning escapement adequate for upbuilding of the run; (2) divide the catch as equally as possible between the fleets of the United States and Canada.

Henry Fox Passes

Henry C. Fox, who from 1935 to 1951 was superintendent of the Salmon Bay Fishermen's Terminal, Seattle, died March 4 at his home in Seattle, aged 70. A native of Indiana he came to Seattle in 1906.

h-Tracking Device ployed by Scientists

he U. S. Fish and Wildlife Service Fishery Biology is using the latest ineering developments in under- er sonic devices to study the be- ior of adult salmon in their up- am migration. Production models the *Sea-Scanar*, engineered and de- oped by the Marine Division of nneapolis Honeywell Company, e been modified to aid Service bi- gists in the observation of fish vements under a variety of hydrau- conditions.

An automatic tracking receiver and small signal generator have been veloped to enable the biologists to ck closely the movements of an lividual salmon. The signal gener- or is attached to the fish and the ceiver automatically "homes" to the nal. In this way, the position of e fish in the stream or fishway is corded on a calibrated cathode ray be. The tracking receiver is mounted an 18-foot work boat.

With the use of this equipment the te, depth and route of migration of ult salmon, plus their reaction to stacles along the route of migration n be determined.

Observations of salmon behavior ill be made in the vicinity of fishway ntrances and collection systems of ms, fishway exits and in the fish- ays.

emote Control Extends Iron Mike's" Utility

Fishermen laying-up their boats for ne year after trying the new remote ontrol unit for Wood Freeman Metal Marine Pilots report that the unit adds ubstantially to the utility of the steer- ng unit.

Mr. Freeman had the steering unit nd remote controller on display and perating at the Seattle boat show, and lot of satisfied customers who had sed the new item in its first season topped by to tell him how well it vorked and how much it added to the sefulness of the automatic pilot. This s particularly true of trollers, who can ake the remote control into the cock- it with them, handling the boat read- y from the fishing station.

Veteran Fisherman Passes

Magnus D. Finney, owner of the illnetter *Susie*, who has fished out of Seattle the last 20 years and was pre- viously at Ketchikan, died Feb. 18. He vas a native of Norway, aged 66. He vas a member of both the Puget Sound Gillnetters Association and the Deep Sea Fishermen's Union.

Drum Seine Development Seeks Way to Ease Wear

● New gear development has a wide field in the drum seine—as yet only a few years old at best, and in the American fleet only about three.

The Canadians pioneered this form of fishing, and took it through the experimental years. When the drum seines seemed to be working, the Americans went over to Canada to learn—and what they saw left them wild to try it also.

Now drum-seining is well-established on Puget Sound, and shows signs of spreading widely, wherever it may be attempted. Like several other innovations, fishery authorities have been inclined to bar the way to the introduction of improvements in gear or equipment which by the greater efficiency may impose greater and perhaps uncontrollable pressure on the stocks of fish.

Last month in these pages we showed a sketch of a new drum seiner being completed at Bellingham for Capt. Peter Pecarich. This boat is notable in that the drum is mounted on a rotating table—just like a conventional seine table—which permits the table to be swung as the gear is recovered, thus greatly reducing the wear and strain put on the net.

This matter of excessive net wear has been one of the main drawbacks to drum seining from its inception; and to the solution of this problem has gone a lot of the sharp thinking which drum seining set in motion.

The Pecarich drum seiner has a well in her stern and a rectangular hole cut in her turntable. The lower half of the drum goes through this opening in the table, while the well in the hull accommodated the drum and permits the table to rotate in such a way as to take the seine aboard fair with the drum.

As fishermen and designers have sought the answer to this problem of the strain imposed on the net by drum seining some have favored the solution which relies upon a vertical drum rather than a horizontal one. With such gear it is possible to lead the net to the drum from any angle, but then there's the necessity of spooling it in such a way that the net will be distributed over the entire drum and not allowed to pile-up.

The coming season should pretty well provide the answer as to which modification gives best results in easing the strain on the net imposed by drumming.

Along with the problem of how to rig the reel, drum seining has imposed new requirements on the seine skiff, which more than ever must have plenty of power, and also by all means should have some sort of a live head or gypsy. The towing-off assignment for the skiff is a vital one, and these boats carry as much power as many seiners of a couple of decades back.

Mackerel and Anchovy Operations Stabilized

The mackerel-anchovy fishery in Southern California stabilized to some extent in early March, with canners agreeing to accept tonnage on a 30-day period at $45 for Pacific mackerel, $42.50 for Jack and $25.00 a ton for anchovy.

Fishing was conducted on a basis of a minimum and maximum daily limit and a requirement of an overall maximum fleet tonnage per cannery. Tonnage required for a cannery was based on an average of 150 tons per boat operating per cannery, over the 30-day period.

The prices became effective for the 30-day period as of Feb. 11. By Feb. 24 only 686 tons of mackerel had been delivered. All canneries in the Long Beach-Los Angeles harbor area were reported to be packing them.

Synthetic Web Finding Its Place in Trawling

● Taking a tip from New England—where trawling is an old, old craft—Pacific Northwest draggers are experimenting this spring with the use of synthetic web in their otter trawls.

This type of gear has been used for a year or two on the Atlantic coast but it is coming into attention on the Pacific this season for the first time.

Wear resistance is the principal advantage claimed, although there are said to be a good many advantages.

One fisherman who has used a trawl made of "Nylock" processed nylon twine says he has had longer service from it than any other trawl he has used, and that the net not only seems to last longer but to fish better.

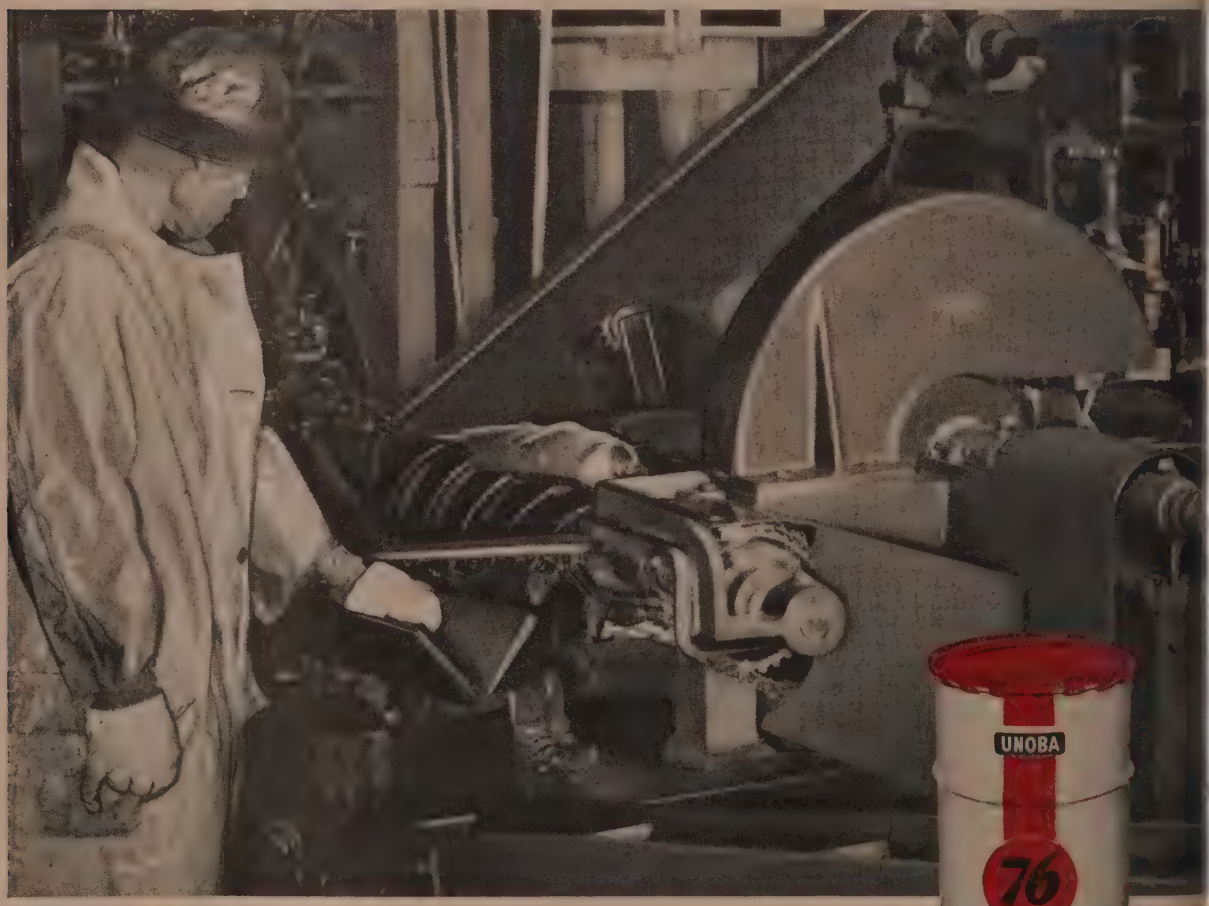
"UNOBA... protects our 'iron chinks'"

J. K. Johnson, resident manager, New England Fish Co., Ketchikan, Alaska

"Union Oil lubricants have been doing an outstanding job of protecting the machinery in our Ketchikan cannery for 27 years.

"A case in point is Union's UNOBA grease which protects the bearings in our 'iron chinks' and other canning machines. Nothing we know of can equal UNOBA'S resistance to the continuous water, steam and salt conditions prevalent in every salmon cannery."

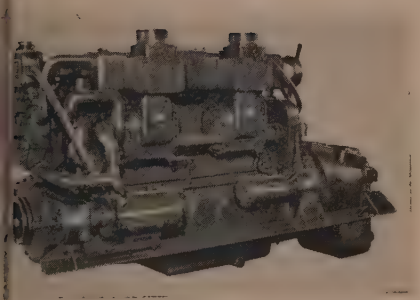
Mr. Johnson is right! UNOBA has proved its superiority in canneries from Mexico to Alaska. You have only to try UNOBA in your own equipment to be convinced. Your nearby Union Oil representative will give you prompt delivery.



UNION OIL COMPANY
OF CALIFORNIA

Los Angeles: Union Oil Bldg. • New York: 45 Rockefeller Plaza • Chicago: 1612 Bankers Bldg. • New Orleans: 644 National Bank of Commerce Bldg. • Atlanta: 401 Atlanta National Bldg. • Kansas City, Mo.: 612 W. 47th St.

when to look a horse in the mouth



Now you can have diesel power! Lightweight, lower cost, more compact, safer P&H 2-cycle Marine Diesels start at 30 h.p. and range up to 255 h.p., 2, 3, 4 and 6 cylinders. Also marine generating sets.

DUSTRIAL & MARINE ENGINES, Inc.
804 East Anaheim St.
Wilmington, Calif.

ARKER DIESEL ENGINEERING CO.
945 - 19th Ave.,
Oakland, Calif.

The answer is, *whenever you buy horsepower.*

Horsepower ratings can be tricky. An engine rated at 90 h.p. in the laboratory may produce far less on the job.

For the P&H Diesel, we've chosen a more realistic measurement. *Working* horsepower. Buy 90 h.p. and you *get* 90 h.p. — at the drive shaft, where you can put it all to work.

Of course, when you're looking at diesels, you'll want to look at the cost. When you do, you'll learn that a P&H costs less per horsepower than any other. Look again, and you'll see that it delivers more horsepower for every pound of weight. Once more, and you'll find that of all the diesels this one is the easiest to service.

Why look further?

P&H Diesel Engine Division, Harnischfeger Corporation, Crystal Lake, Ill.

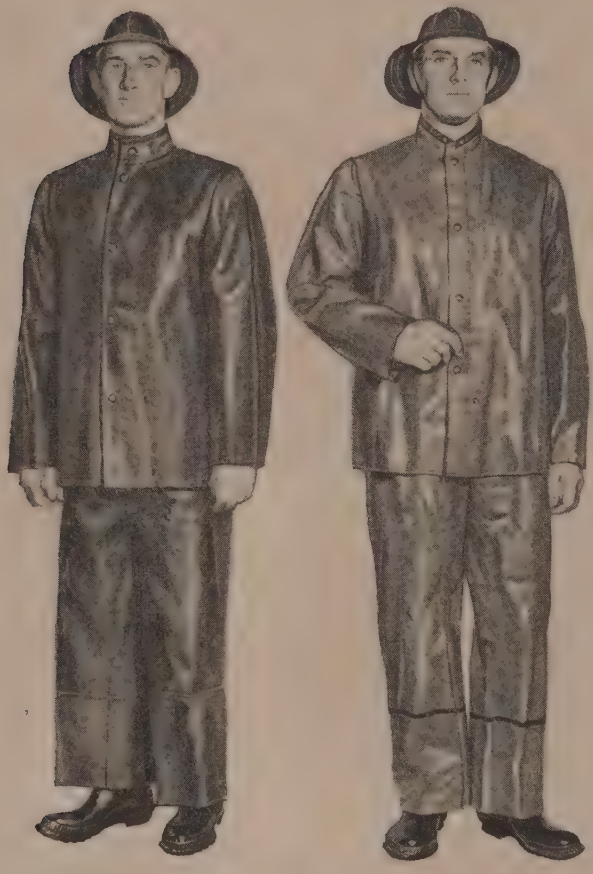
THE P&H DIESEL

lowest price per horsepower
lowest weight per horsepower

When you ship green water

...KEEP DRY

U. S. Rubber Raynster workmanship means built-in dryness. Special compounds provide greater resistance to abrasions, sun and cold.



U. S. RUFF-N-TUFF EUREKA SUIT

• inside fly front • corduroy-tipped collar • rust-resistant ball and socket fasteners • underarm ventilation • overalls: elastic suspenders • cut-off band permits shortening, won't curl or ravel • black.

BLACK EUREKA BOOT

• duck-lined, shockproof, thigh-high . . . for maximum comfort.

U. S. PEERLESS NEOPRENE SUIT

• Neoprene outside, inside • resists acids, oils • full-length jacket • corduroy-tipped collar • cemented seams • rust-resistant ball and socket fasteners • bib-front overalls • adjustable suspenders • cut-off band permits shortening without curling or raveling • black, olive drab or safety yellow.

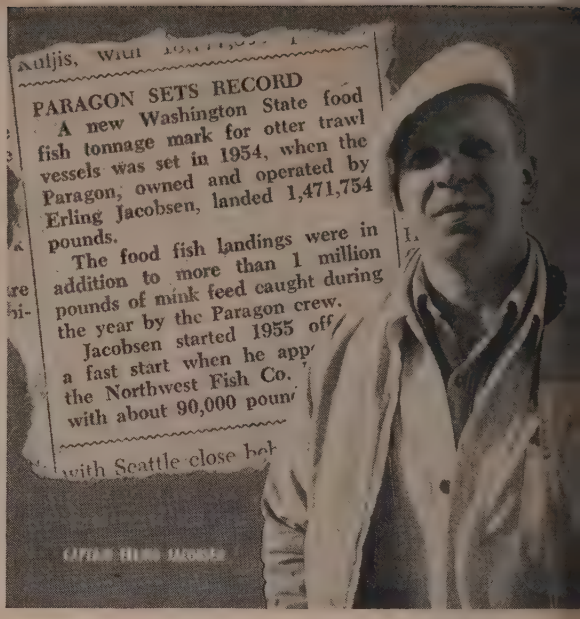
U. S. SQUAM HAT

• reinforced water-shed brim.

SOLD ONLY THROUGH INDUSTRIAL AND RETAIL STORES

U. S. INDUSTRIAL RAYNSTERS®
U. S. ROYAL RUBBER FOOTWEAR

UNITED STATES RUBBER COMPANY
ROCKEFELLER CENTER • NEW YORK


PARAGON SETS RECORD
A new Washington State food fish tonnage mark for otter trawl vessels was set in 1954, when the Paragon, owned and operated by Erling Jacobsen, landed 1,471,754 pounds.
The food fish landings were in addition to more than 1 million pounds of mink feed caught during the year by the Paragon crew.
Jacobsen started 1955 off
a fast start when he app
the Northwest Fish Co.
with about 90,000 poun
with Seattle close beh

SKIPPER CREDITS EDO FISHSCOPE FOR RECORD-BREAKING LANDINGS

"The Edo Fishscope has proved of more help in catching fish than any other piece of equipment I've ever installed," says Captain Erling Jacobsen of the *Paragon.*

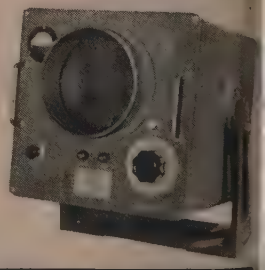
"On our first trip in 1955 we brought in 90,000 lbs. in two days. Without the Fishscope this trip would have been much longer. *The Fishscope showed us where the fish were.* In the first year my Fishscope will have paid for itself.

"I never set my gear unless I see a catch indicated on my Fishscope. Experience has proved that making a set when I don't see a catch is a waste of time. When I see heavy concentrations of fish I can haul in easily and save overloading my net. This has saved my gear on several occasions.

"My Fishscope is also the best echo sounder I have ever used. I can tell changes of depth within a few feet. My other sounders are just standby units now."

FIND MORE FISH, FASTER—WITH THE EDO FISHSCOPE!

The Edo Fishscope, designed specifically for locating fish, is now available in three ranges—0-500 feet, 0-250 fathoms and 0-400 fathoms. After fish are spotted on cathode ray screen, any 10-fathom sector can be magnified 20 to 40 times to permit close scrutiny of depths where fish are indicated. Hundreds of Fishscope-equipped boats are now getting bigger hauls in far less time. Write for descriptive brochure.



Edo CORPORATION
College Point, L. I., N. Y. SINCE 1925

How California Fishermen Use Synthetic Fibers and Resins in Fishing Gear . .

Of increasing importance in the ve-bait tuna fleet is the use of syn- etic fiber in "crowder" nets. Such ets are used in the large live-bait nks to raise the bait when the sup- y becomes low, and in the tanks om which the chummer operates. Fishermen declare such nets made synthetic are easier to handle; ime does not adhere to them; de- rioration is reduced; and no special reservative treatment is required.

Such nets have a ½" mesh stretch nd are hung on ¼" cotton line. The verage crowder net is 15' square by ' deep, and generally works from ne coaming of the tank. Such clippers s the *American Lady, Normandie* nd *Mary Lou* are using synthetic in neir crowders.

Synthetic (of the braided type) is lso making its appearance in the bait coops. Nylon line is replacing wire, o some extent, as leader on tuna oles.

In the San Pedro purse seine fleet, ylon netting in certain sections of he purse net is being tested on such essels as the *North Queen, Columbia* nd *Renown.*

• *SAN PEDRO GILLNETTERS* are urning more and more to nylon nets or catching sea bass. With the use f this netting goes installation of ower-driven reels similar to those in se on the Fraser River and Puget Sound.

Development of the anchovy fishery n Southern California, caused some- what by the lack of sardines and mackerel during the past few years, as brought an emphasis on a new ype of lampara net and power haul- ng of the net by twin gurdies. Some oats are using the lampara for sar- dines, instead of the heavier purse seine; and it has been tried for tuna also in the high seas off Mexico. To some extent, nylon is being used in certain portions of the lampara.

The use of twin gurdies, generally driven from the main engine, for haul- ing lampara nets apparently stems from Santa Barbara and vicinity. The new type of vertical gurdies eliminates the swinging fairlead and places the net roller on the stern, rather than mounted on the gurdy itself. Each gurdy rotates in the opposite direc- tion from the other.

C. J. Hendry Co. reports that Ederer spun nylon will soon be used on a Farallone Fisheries trawler out of Santa Barbara, for the cod end, wings, etc.

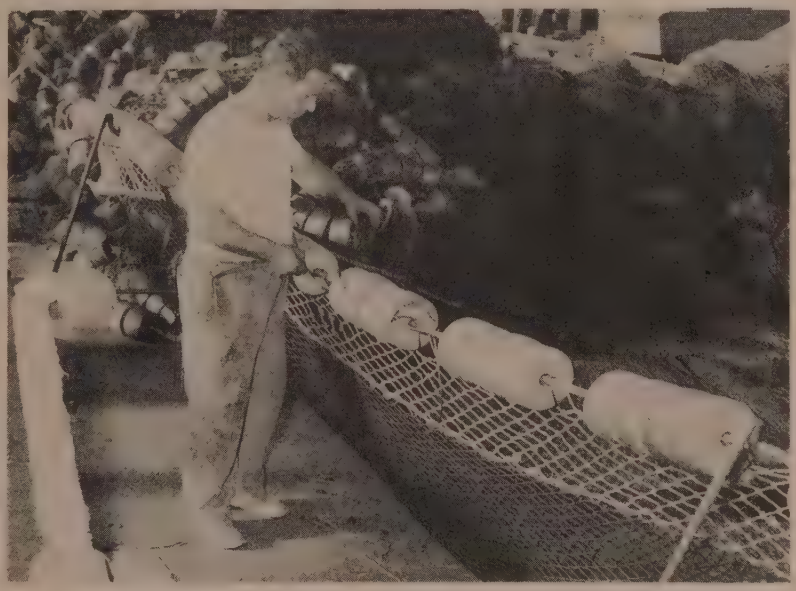
Use of nylon cork-line, with a circumference of 1 3/5" to 2" for the tips and 2" to 2¾" for main section, while not completely new in the purse seine fleet, is definitely on the increase.

Plastic floats are becoming almost standard in the net fleets of Southern California. For example, the Porter Brothers' boats out of Port Hueneme use Spongex floats, 3x6" in the wings, 4x8" for the remainder of the net. Note the picture showing the hanging of the *Stranger's* sardine net with Spongex floats.

• *REINFORCED PLASTICS* — In the tuna bait fleet interesting work is being done with reinforced plastic. For example, bait tanks are lined with fiberglass and resin. One San Diego yard has constructed fish transfer chutes of reinforced plastic. The same materials are being used in galleys and other sections of the vessels where durability and strength are paramount. One yard is testing Celastic as a lining for a bait tank on a tuna clipper. Harbor Boat Building Co., Terminal Island, has made new use of reinforced plastic on plywood by constructing brine tanks for the *Marauder,* one of San Pedro's largest purse seiners; and is also using this material on rudders and as a replacement for the conventional lead sleeve on shafts.

The trend is toward purse seine skiffs constructed of plywood and covered with resin and fiberglass. Fishermen value the fact they are light of weight, and yet durable. Again, in the tuna bait fleet, tenders are being built of plywood covered with fiberglass.

Five-bladed propellers are interesting boat owners in the San Pedro and San Diego fleets. Examples are the purse seiner *Anthony M* and the bait boats *Judy S* and *Normandie.*



Hanging Spongex floats on sardine net of the San Pedro purse seiner **Stranger**

Use of high seas radiotelephones for vessels cruising wide and far is definitely on the increase in Southern California, and development of electronic equipment in the fishing fleets has included the installation of several Sea Scanars, sonar device for detecting fish. Bendix Aviation Corporation, North Hollywood, has just introduced a new low-price marine radar for fishing boats. It will scan at one, three, ten or 20-mile ranges. The same company has also engineered a new small and compact fish scanar which produces a record, working with a Bendix recorder, of schools of fish to be found at a horizontal range.

Use of aircraft for spotting schools of fish is definitely on the increase in Southern California. Porter Bros., Port Hueneme, have used planes for

GM DIESEL
CASE HISTORY No. 155-1AFSS

BOAT AND OWNER: 65-foot shrimp trawler "DONNA JEAN" owned and operated by Captain Arthur Miller of Rockport, Texas.

INSTALLATION: General Motors "6-110" Marine Diesel swings 50" x 44" screw through 4½:1 reduction gear.

PERFORMANCE: "DONNA JEAN" measures 65' x 18'6" x 8', has speed of 10 knots. Built by Jackson Marine Services, Rockport, Texas, builders of "20-year trawlers." Captain Miller also operates GM Diesel-powered "TEXAS 14" trawler.

It pays to STANDARDIZE on

GM
GENERAL MOTORS
DIESEL POWER

Years of Low-Cost Trouble-Free Service sells another GM DIESEL

The General Motors Diesel-powered "TEXAS 14" had seen a lot of service when Captain Miller bought it in 1951. Yet for 3 years, the General Motors Model "6-71" 2-cycle Diesel gave him such economical, trouble-free service that Captain Miller *specified* GM "6-110" Diesel power for his new boat.

There are reasons aplenty for specifying a GM "6-110" Diesel in new boats or when repowering your present craft.

You'll save money because a GM "6-110" Marine Diesel lists for up to 53% *less* per continuous horsepower than other Marine Diesels of comparable power. It weighs as much as 61% *less*, frees hull space for more pay load because it's more compact than other Marine Diesels in its range.

Fast-accelerating GM 2-cycle Diesel operation gets you out to the grounds and back into port with your catch ahead of the fleet.

General Motors Marine Distributors cover the water front with day-or-night service and genuine factory parts. Drop in on your local dealer next time you're in port—he'll show you why a GM Diesel is your best buy.

DETROIT DIESEL ENGINE DIVISION
GENERAL MOTORS • DETROIT 28, MICHIGAN
Single Engines . . . 30 to 300 H.P. Multiple Units . . . Up to 893 H.P.

Sales, Factory-Engineered Parts and Authorized Service through distributors and dealers in all important marine locations. SEE your local Telephone Classified Directory or write, wire or phone for name of nearest Distributor.

veral years in locating schools of chovies, etc., and experimented with plane in the Gulf of California to cate tuna.

In addition, the California Fish and ame, Marine Fisheries Branch, has ed a Beechcraft and a Cessna to rvey areas such as Tomales Bay, n Pablo Bay and Half Moon Bay r schools of herring, anchovies, etc.

During the Southern California sar- ne season, two flyers maintained a sh spotting service out of San Pedro, vailable to boat owners wishing to ilize it.

Paragon" Sails North On Sea Otter Job

The trawler *Paragon*, high boat for ne 1954 trawl season, sailed north the Aleutians February 28 on a ish & Wildlife charter. The vessel ill take part in a program designed t increasing the sea-otter groups in ne Aleutians. The animals were once umerous along the entire Pacific oast as far south as Lower California. ubject to heavy exploitation by merican, English and Russian hunt- rs, it was nearly exterminated. The ea otter is now under strict federal rotection. The remaining animals re found only in remote areas along he Aleutian chain and on a rugged ortion of the California coast near Monterey. Its soft fur is of fine qual- ty and shortly before they were given rotection in 1911 skins put on the narket brought up to $1000 each. The male may attain a weight of 80 ounds and a length of about five eet.

The animals will be trapped on eaches and the *Paragon* will catch ufficient feed for the otters and will ransport them to new islands in an ttempt to increase their numbers and ange.

Two biologists, Karl Kenyon and Ford Wolkie, will accompany the ves- sel during the voyage. The *Paragon* will be skippered by Harry Jacobsen, brother of the owner.

Man Lost in Collision

A recent collision in Seymour Nar- rows, B. C., between a seiner and the B. C. Packers' freighter *Teco*, resulted in one man being lost and two rescued. Ivan Radijov, skipper of the seiner *East Bay No. 1*, and engineer Peter Mihovilich were rescued by the pack- er's crew, but Nick Valkovic, the cook of the seiner, apparently became caught in the wreckage and went down with the ship.

Cable meter is a new gear item for trawlers, and here is one in operating position on the Seattle dragger **Mitkof**, with Capt. Ivar Angell relaxing at the right. At the left is **Harold Hanson** of the **Mitkof** crew. The meter gives exact measure of the amount of warp run.

Cable Meter Successful On Dragger "Mitkof"

During the past year, the Olympic Instrument Company of Cove, Wash., has been developing a cable meter for use by draggers. The meter would eliminate the need of marks and lengthen cable life. After a number of test models were experimented with, a final workable heavy duty model has been devised. The success of the cable meter was demonstrated aboard the Seattle trawler *Mitkof* while dragging off the Washington coast. While fishing in 180 fathoms of water and with 400 fathoms of 5/8" cable out the trawl cable became fouled by another vessel passing too close astern. The cable was severely strained and it was necessary to re-adjust the marks. Normally, the vessel would have returned to port to remark the cable. However, a pair of cable meters which were aboard for test, were used and dragging resumed immediately.

Ivar Angell, skipper of the *Mitkof* also reports the meter can be used to check wire marks or to remark if marks were needed. The meter has been given a number of trial tests and is reported to be very accurate.

Canadian Gillnetters All Fish Nylon Nets

British Columbia gillnetters have switched virtually 100% from linen to nylon web, acording to a note received by PFN from R. Cosulich of Ladner, B. C. He emphasizes that the swing to this gear, its great productiveness, and the attraction which something new and spectacular has for interested men had tended to bring more and more people into the fishery. Result is that Mr. Cosulich finds its overcrowded and notes that many individuals have difficulty in making a decent living even in years of good runs.

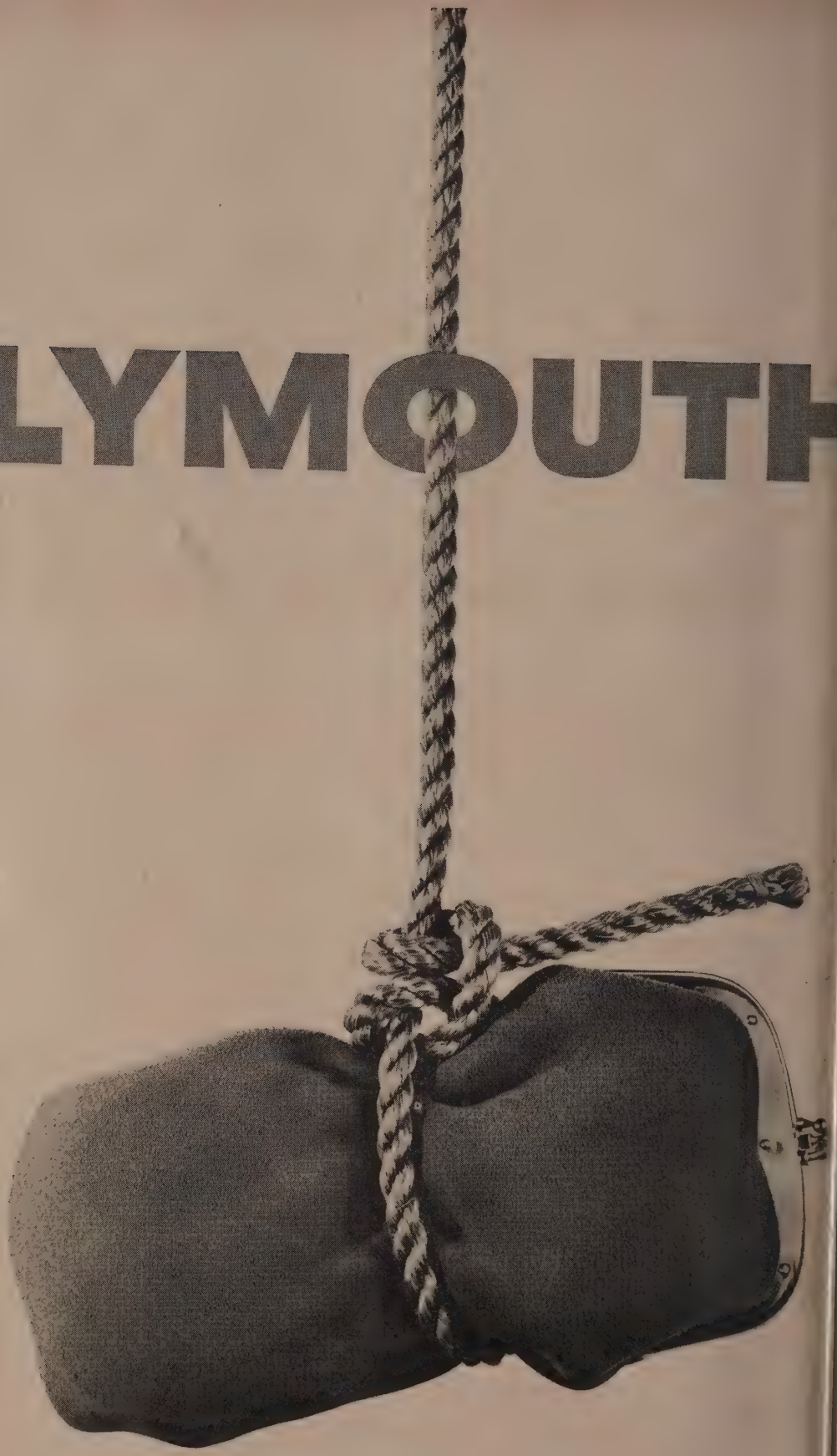
He finds the same thing true with respect to purse seining, and particularly since the rise of drum seining has seen construction of a good many new boats and conversion of others.

Where drum seines have competed directly with table seines in Canadian waters he believes that the drummers have averaged higher earnings, due primarily to their faster sets and the ability to make more sets per day.

Co-Op Equipment Sold

Last remaining equipment of the defunct Eureka Cooperative Fisheries was auctioned off recently. It included a large crab cooker, flake-ice machine, etc., which brought about $1,000. Andrew Lindstrom has been serving as president of the organization, which has been in process of liquidation since 1952, after operating about five years.

PLYMOUTH



ROPE helps you haul in the cash

From the Grand Banks to Puget Sound, and in most of the bays, coves, gulfs, rivers and lakes in-between, commercial fishermen depend on Plymouth fishing ropes and lines to help haul in the cash.

Fishermen know that each Plymouth rope is engineered for the specific job. Aside from the technical excellence, they like that certain Plymouth feel in their hands and that sure Plymouth dependability in action. Fishermen have felt this way about Plymouth for 131 years. That's why today, with big-money catches at stake, so many fishermen say, "I'll take any rope you've got—as long as it's PLYMOUTH!"

Plymouth Cordage Company

Plymouth, Massachusetts · New Orleans, Louisiana

PLYMOUTH TRADE MARK 1824

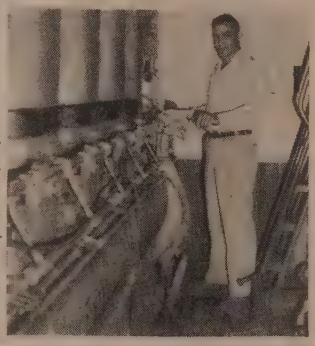
Standard Engineer's Report

CASE HISTORY
PRODUCT RPM Delo Oil and Standard Diesel Fuel
FIRM M.V. West Coast, San Diego, Calif.

Liner wear only 0.0025" after 18,200 hours' work!

OUT AFTER TUNA THE YEAR AROUND, the M.V. West Coast goes as far south as Peru. This clipper's 400 h.p. diesel works under constant load as long as 90 days at a time, but RPM DELO Heavy Duty Lubricating Oil keeps all engine parts clean and in good condition.

Liner wear was only 0.0025" at time of last inspection—after 18,200 hours of tough work since overhaul. All piston rings were clean and free, pistons and cylinders had no deposits, and bearings were in perfect working condition.



CHIEF ENGINEER MANUEL VIERRA uses Standard Diesel Fuel exclusively. Its controlled distillation range and high ignition qualities provide full, uniform power. Because it is delivered clean, injector nozzles in the West Coast's engine are cleaned only once a year. Not one has been replaced since the last overhaul.

FOR EXPERT HELP on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative; or write to 225 Bush St., San Francisco.

STANDARD DIESEL FUELS
RPM DELO LUBRICATING OILS

How RPM DELO Oils keep engines clean and prevent wear

A. Contain special additives that provide metal-adhesion qualities...keep oil on parts whether they are hot or cold, running or idle.

B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean, helps prevent scuffing.

C. Special compounds stop corrosion of any bearing metal, and oil foaming in both wet and dry sump engines.

TRADEMARK REG. U. S. PAT. OFF

STANDARD OIL COMPANY OF CALIFORNIA

.F.U. Offers Arguments or Tariff Maintenance

Though supporting the policy of rendering assistance to free foreign nations, the Alaska Fishermen's Union, a letter to Washington State's congressional delegation, gave an emphatic NO to the question whether lowering of tariffs on fishery products is justified at this time, and whether it would be of such economic importance to foreign countries that it must be accomplished regardless of cost to our domestic industry.

"We have a difficult time competing under existing rates," said the union, and if this becomes a free market we look forward to gradual unemployment which will reflect itself very seriously in the economics of Alaska and the states." Also, it was pointed out, with lowered tariffs "there is going to be a race among foreign nations to find the best fishing grounds available."

The letter mentioned the successful measures, in conjunction with Canada, to conserve our halibut and Sockeye salmon fisheries, and efforts to preserve the coastal groundfish; adding, "The only way we can safeguard our coastal fisheries is by treaty. . . . It will be much more difficult to negotiate a treaty if, because of the absence of tariffs, the market is so lucrative for foreign operators that big profits are possible. . . . If American fishermen are squeezed out of business, we are not only leaving our markets to foreign nations but we are also leaving our fishing grounds for foreign subjects to utilize. . . . At the rate our population is increasing, our fishery resources will become ever more important to us year by year."

Pointing to the impressive increase in the Japanese salmon catch in North Pacific waters — from 2,100,000 fish in 1952 to 7,700,000 in 1953; 20,493,000 in '54, and an estimated 40,000,000 in '55 — it declared, "We know that the only big market for these products is the United States . . . We need more protection instead of less!

MANUEL ABREU, Sausalito, has installed a Raytheon DE116 Fathometer in his trawler *Three Sisters*. The equipment was purchased from and installed by Cal-Marine Radio Phone Co., Fishermen's Wharf, San Francisco . . . Manuel Noto, San Francisco, also installed a Raytheon Model DE116 Fathometer in his trawler *Ella* . . . Dominic Vella and Pete Beltrano, both of San Francisco, have installed Chrysler Crown engines in their crab boats. They were purchased from and installed by Boicelli & Boss, Fishermen's Wharf, San Francisco.

Steel Longline Gear For Tuna Still Full of "Bugs"

● Stainless steel longline gear for tuna hasn't proven to be the brilliant success that it was expected to be—not yet.

There's still lots of reason to believe that therein lies the answer to making the longline method of fishing tuna economically sound for American fishing vessels; but equal there's lot of things yet to be learned about the way to rig and fish such gear.

When longlining proved the best—if not the only—practical means of catching tuna in such regions as the Line Islands, it appeared that steel gear offered the means of cutting-down the labor demand and making longlining applicable to American fishing boats and fishermen.

Early experience with the gear, however, indicates that there are a number of problems to be solved before it can be counted successful.

Believe it or not, a lot of gear—and fish—have been lost because the big tuna taken at the levels where the longline gear fishes actually break the steel wire of the "droppers" or gangions. This is believed due to several factors, among them being the lack of elasticity in the steel. When a big, heavy tuna puts his weight against the gear at high speed there just isn't enough slack and give to moderate the shock.

The clips or clothespins by which the droppers are attached to the mainline also have caused some trouble, and the several designs tried out by Pacific Oceanic Fisheries Investigations all have shown some faults. The experimentation there continues and gives promise of coming-up with the answer.

There's been a good deal of experimental work in the way of letting some elasticity into the droppers by including a section of trolling rubber, or by using filament nylon in the droppers. Several of these devices show promise, but all require further testing.

In the meantime, heavier steel gear is being used in connection with the Kayler-Dahl operations around Palmyra Island and it is anticipated that practical halibut fishermen, working new fish and with new materials in their gear may come-up with the answers.

Further Drum Seine Development Forecast

Further development of the drum seine is forecast for 1955 by Peter Schmidt, Jr., of the Marine Construction & Design Co., Seattle, which has specialized in engineering and building the drums and their equipment ever since this form of fishing was introduced on Puget Sound from British Columbia, where it originated.

Although not too much is expected of the Sockeye run of 1955, the coming season will be a "Pink year" and a good many of the Puget Sound seiners who participated in the Sockeye Bonanza of 1955, when the fishermen divvied-up around $5,000,000 for their catch, are expecting to spend part of it for modern drums and nets.

MARCO at presstime had the first of its 1955 boat orders just about complete, and was expecting to install a number of drums before the season opens next summer.

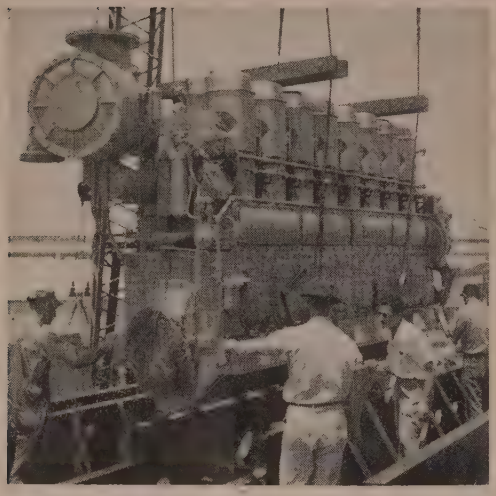
This company designed and built the great drum which Capt. Hans Mikelsen mounted on his *Trade Wind* last summer. While there'll be plenty of gear run at sea next summer, there's been nothing on the wind this spring to indicate that *Trade Wind's* big drum will be outranked next season. The giant drum on *Trade Wind* rotates from side-to-side, as well as revolving on its axis, and thus permits the net to pay-out and be recovered from whatever quarter gives the freest pull and least wear and strain on the gear.

Light Drag Catches Off Northern California

Reflecting a seasonal scarcity in northern California waters, bottom fishing operations out of Humboldt Bay resulted in relatively light deliveries most of February, with frequent spells of rough weather. Rock cod was showing up in considerable quantity in catches delivered at Eureka.

Meanwhile William Werblow, manager of the Theo Weissich Fish Co. at Eureka, said his company has added an extra shift to meet the demand for fish sticks, and is now operating on a 22-hour schedule. The company imports most of its fish from the north.

Soares brothers build sister ships, choose Enterprise Diesels for dependability

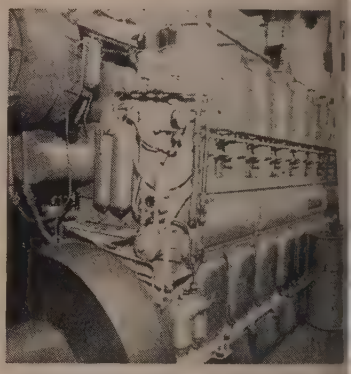


Main propulsion engine, the 8-cylinder turbocharged Enterprise, rated 950 BHP at 450 RPM, is readied for installation.

The 127-foot "Cabrillo" beat estimated fuel consumption by 20 percent on her las run from San Diego to the Galapagos.

Owner Joe Soares' "Cabrillo," which like the "Dominator" was built by National Steel & Shipbuilding Corp., San Diego.

Large five-blade 90"x74" propeller, driven through 2:1 Universal reduction gear by 8-cylinder Enterprise, insures more speed, efficient operation.



Enterprise intercooling on these engine normalizes them for high output in the trop ics, providing extra power with less fuel.

These Enterprise-powered boats range thousands of miles for payloads of 350 tons without refueling.

Proof that Enterprise engines are the choice of power experts cam with the selection of Enterprise again by George and Joe Soares fo their newest tuna clippers, "Cabrillo" and "Dominator." Enterpris has rung up trouble-free performance and low fuel consumption record for these successful San Diego brothers for other of their tuna clippers including the "Liberator" and "Judy S."

There is an Enterprise that is best for building your profits too through greater efficiency, lower cost operation. Choose from model of 73 to 6150 HP. The experienced Enterprise marine diesel enginee in your area will give you complete information. Call him, or writ us direct about your problem.

Over a million horsepower at work the world over!

ENTERPRISE dependable ENGINES

THE SWITCH IS TO ENTERPRISE
CHOICE OF POWER EXPERTS

ENTERPRISE ENGINE & MACHINERY CO. • Subsidiary of General Metals Corporation • 18th and Florida Streets, San Francisco 10, Californi

Boston • Chicago • Denver • Jacksonville • Kansas City • Los Angeles • Minneapolis • New Orleans • New York • San Diego • Seattle • St. Louis • Washington, D.C.

SCOPE and SOUNDER

Monthly digest of present-day pioneering methods and equipment in world fisheries.

By PETRALE*

Petrale's Comment on— Winter Trawl Closure

In the March issue of *Pacific Fisherman* was published a letter received from Roy L. Morgan requesting Pacific Tri-State action on a possible winter trawl closure along the Pacific Coast and requesting comment from *Petrale*.

The merits of a winter trawl closure is a hot topic, which has been discussed by fishermen and processors from San Francisco to Bellingham. There is by no means complete agreement among the fishermen as to the desirability of a closed winter season. Petrale's comments are not necessarily the ideas expressed by fishermen, processors or biologists, but are the results of experience and contacts with the trawl industry and with scientists concerned with the conservation of bottom fish stocks.

The trawl fishery is one of the most complex on the Pacific Coast, as it exploits a great variety of species depending upon the area and demand. The problems of conservation under such conditions are complicated. The possibility of the Pacific Marine Fisheries Commission acting on a closed winter trawl season has been suggested. However, it is the opinion of the Tri-State biologists that this is an economic problem, not a biological one. Present thinking of most fishery scientists is that fisheries should be exploited to the point of "maximum sustained yield". In simple terms: the fishing should yield the greatest poundage it can deliver without destroying its ability to continue this production. Under this thinking, the effort expended towards capturing any species should not be diminished unless the fishery shows signs that it is being *taxed beyond the point where it can maintain the highest sustained production*. Above this level lies over-fishing. The only legitimate biological argument for a reduced catch is a reduction in the potential of a fishery as result of over-fishing; or possibly from adverse environmental conditions which have resulted in poor recruitment of young.

Such conditions cannot be applied to the trawl industry as a whole. It is true that several species of "sole" have showed signs of depletion in certain areas. However, this condition is not coastwide. During the past several years, production of true cod and English sole has been at its highest level by the Washington trawl fleet during winter months. There has been no indication by either the Washington Department of Fisheries or the Fisheries Research Board of Canada that these species are being over exploited. Conversely, they have shown worry over only the Petrale sole and sablefish. It would not seem biological justice to penalize the production of other species, which account for more than 80% of the catch captured by the Washington fleet, in an effort to conserve these two. Each species should be considered as a separate biological problem; and, if conservation is needed, restrictions should be made which would afford its protection. This type of control was suggested for Petrale sole by biologists at the last P.M.F.C. meeting. (See page 19, *Pacific Fisherman*, Feb., 1955).

● The argument that a winter closure would protect spawning fish is true. However, biologists have pointed out that it makes little difference if a potential spawner is taken six months prior to spawning, or one day. In either case, the same potential egg production has been lost. Mathematically, this seems to hold water. In many fisheries (cod, herring, salmon, etc.) a large part of the catch is made during or just prior to the spawning season. To have conservational value, a regulation must reduce the total catch of the species involved regardless of season. The fact that weather conditions are adversed during winter months indicates that the total fish savings may not be as great in the winter as during other periods of the year.

A winter closure does not consider the many species which show no

---

***Petrale will attempt to answer questions from readers; and will welcome correspondence relative to developments which fishermen may consider worthy of inclusion in future editions.**

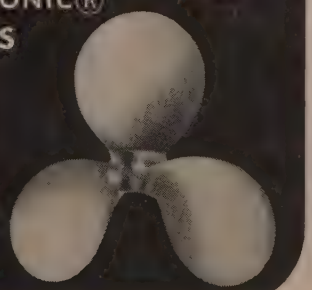
Comments, questions and contributions should be addressed to: PETRALE, Care Pacific Fisherman's News, 71 Columbia St., Seattle 4.

CONTINUALLY ON GUARD

CUPROLIGNUM prevents rot in nets, boat timbers, ropes, etc. By treating your net and equipment with CUPROLIGNUM, you prevent rot. CUPROLIGNUM has been used with outstanding success in the fishing industry for many years. Use CUPROLIGNUM — make SURE your net will hold!

CUPROLIGNUM
HUDD & CUMMINGS
1608 - 15th Ave. W. Seattle 99

Columbian
HYDROSONIC®
PROPELLERS
are known worldwide for exact pitch and balance, rugged power and speed, top fuel-economy. Diameters from 8" to 20". Ask for Catalog on Propellers & Marine Fittings.

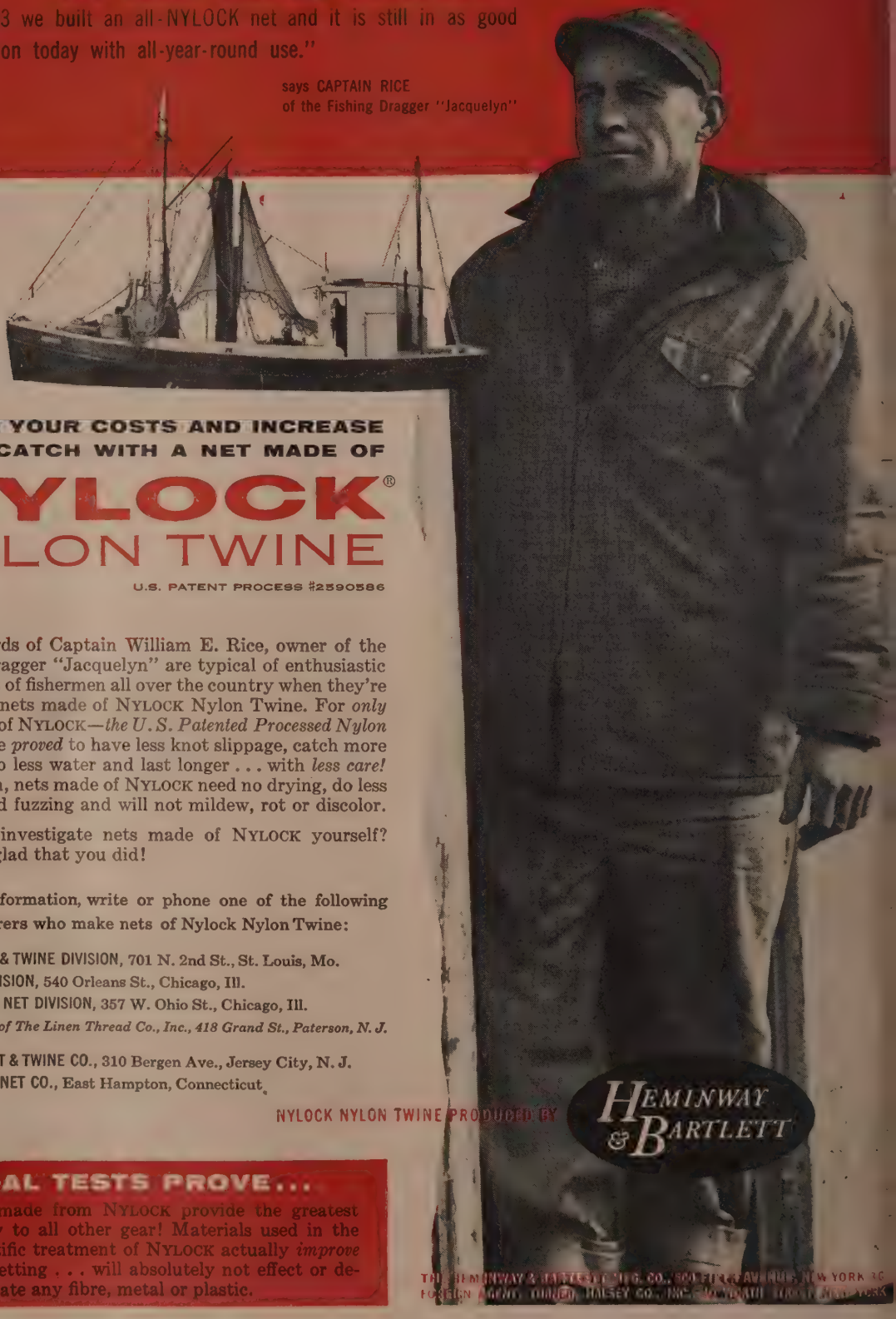


COLUMBIAN BRONZE CORP.
freeport • long island • new york

"My Nylock Net costs me far less in the long run..."

in 1953 we built an all-NYLOCK net and it is still in as good condition today with all-year-round use."

says CAPTAIN RICE
of the Fishing Dragger "Jacquelyn"



LOWER YOUR COSTS AND INCREASE YOUR CATCH WITH A NET MADE OF

NYLOCK®
NYLON TWINE

U.S. PATENT PROCESS #2590586

These words of Captain William E. Rice, owner of the Fishing Dragger "Jacquelyn" are typical of enthusiastic statements of fishermen all over the country when they're discussing nets made of NYLOCK Nylon Twine. For *only* nets made of NYLOCK—*the U. S. Patented Processed Nylon Twine*—are *proved* to have less knot slippage, catch more fish, absorb less water and last longer . . . with *less care!* In addition, nets made of NYLOCK need no drying, do less fraying and fuzzing and will not mildew, rot or discolor.

Why not investigate nets made of NYLOCK yourself? You'll be glad that you did!

For full information, write or phone one of the following manufacturers who make nets of Nylock Nylon Twine:

*ADAMS NET & TWINE DIVISION, 701 N. 2nd St., St. Louis, Mo.
*EDERER DIVISION, 540 Orleans St., Chicago, Ill.
*PAULS FISH NET DIVISION, 357 W. Ohio St., Chicago, Ill.

** Divisions of The Linen Thread Co., Inc., 418 Grand St., Paterson, N. J.*

THE FISH NET & TWINE CO., 310 Bergen Ave., Jersey City, N. J.
A. M. STARR NET CO., East Hampton, Connecticut

NYLOCK NYLON TWINE PRODUCED BY HEMINWAY & BARTLETT

ACTUAL TESTS PROVE...

nets made from NYLOCK provide the greatest safety to all other gear! Materials used in the scientific treatment of NYLOCK actually *improve* the netting . . . will absolutely not effect or deteriorate any fibre, metal or plastic.

THE HEMINWAY & BARTLETT MFG. CO., 501 FIFTH AVE., NEW YORK 17
FOREIGN AGENTS: TURNER, HALSEY CO., INC., 40 WORTH STREET, NEW YORK

ns of depletion, and probably would t give the needed protection to cies which are being over-fished. e expansion and growth of the wl fisheries to maturity should not hampered by restrictions unless y are considered necessary by biol- ists or as an economical aid to the lustry.

In many instances, the request for vinter closure arises because weather nditions are adverse during this riod and a time is needed each year clean up and overhaul trawl ves- s. A three-month lay-up from De- mber through February would allow ne to make needed repairs and give hermen a well-earned rest. The eco- mic result probably would not help e West Coast trawl industry. To be fective, the closure would have to coastwide. It is difficult to con- ive that Canada would follow such plan, as in general they are faced th a problem of marketing bottom sh rather than one of conserving em. Much of their production, as ell as that of Washington, comes om inside waters, which are ideal r winter fishing.

The Pacific trawl industry is no nger a matter of local competition, ut now is in competition with na- onal and international fish pro- ucers. Advocates of the winter clos-

Well-named Winsome, with her forward-ranking bow poles, beautiful shear and snugged-down low-windage house, is a 45' troller owned by Alvin W. Green, Seattle, recently repowered with 105-hp. Cummins diesel engine equipped with a 3 to 1 Capitol hydraulic reverse and reduction gear. The new engine was sold and installed by the North Coast Marine Engine & Equipment Co., Seattle.

ure feel the buyers would be forced to buy more heavily during Spring, Summer and Fall and freeze fish for the closed season. The present specification of Army and other buyers places a fixed holding period on frozen fish products. (In many cases less than three months). It is likely that the closure would force local buyers to satisfy their market with Canadian, East coast or other imports from Atlantic countries.

The objection by dealers to such a proposal is that it takes considerable time to build up an efficient fillet crew. Many of these workers would not be held through a three-month closed season.

It is difficult to forecast the effect a closure of this type would have on the industry, but it would seem that the long-range result would be more harmful than beneficial.

—PETRALE

NAVICOTE is Tops for Bottoms
Bottoms come in a variety of shapes . . . possibly you recognize a familiar shape at the right. And bottoms will be in top condition at haulout time when you use NAVICOTE Marine Finishes. NAVICOTE bottom paint gives superior anti-fouling protection . . . costs less because of longer wear . . . easily applied. YOUR best bottom protection is among these proven NAVICOTE bottom finishes: NAVICOTE Copper (SM), Fisherman's Plastic Anti-Fouling, 7-11 Copper and Hard Racing Finishes. There is a product for every requirement. Why not get your supply from your friendly NAVICOTE dealer this week? Prove to yourself—NAVICOTE Is Tops For Bottoms.
NAVICOTE COPPER
ANTIFOULING PAINT
Featured In LIFE
HART and BURNS Co. Division of DEVOE AND RAYNOLDS COMPANY, INC.
2625 DURAHART STREET
RIVERSIDE, CALIFORNIA

WONDERFUL COMBINATION

ONLY

$169.75

for 6, 12, 32 V

WHITE ECHO DEPTH SOUNDER

LOWEST PRICED IN THE WORLD

"It is the last few feet that count"

1800 soundings per minute . . . equivalent to one sounding every 3 inches at 5 knot boat speed . . . accurate readings in less than 2 feet of water, and on up to more than 80 feet . . . bright flashing light . . . indicator only 4 inches in diameter . . . can be mounted anywhere . . . helps you spot the fishing holes—and the fish. A quality product. May be installed with boat still in the water.

K-W CORSAIR COMPASS

$35. IDEAL FOR SMALL BOATS

OVER 19,000 IN USE

Built-in corrector system **Versatile mounting bracket**

Special red lighting **Half point card also available**

Manufactured by WILFRID O. WHITE & SONS, INC.
BOSTON 10, MASS.

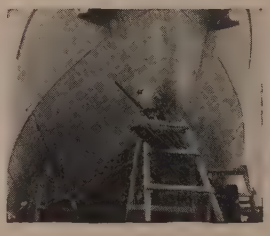
WEST COAST DISTRIBUTORS

WASHINGTON and ALASKA: PACIFIC MARINE SUPPLY CO., 1223 Western Ave., Seattle • OREGON: OREGON MARINE SUPPLY CO., 235 S. W. 1st Ave., Portland • CALIFORNIA: WEEKS-HOWE-EMERSON, 645 Howard St., San Francisco 5—ETS-HOKIN & GALVAN, 551 Mission St., San Francisco • NUTTALL-STYRIS CO., 825 Columbia St., San Diego • BRITISH COLUMBIA: EDWARD LIPSETT, LTD., 68 Water St., Vancouver.

Export Dept., 100 E. 42nd St., New York 17, N. Y.
Cable address: PHILYORK

Be ready when fish are running

Don't be slowed down with a foul bottom or hauled out for repainting when the fish are there. That's the time for fishing. That's why so many smart fishermen everywhere are using "INTER-TROP" Antifouling Bottom Paint, made by International Paint Company, Inc., specialists for over 70 years in the making of Marine Paints. It gives real protection against fouling of all kinds and retains its antifouling properties far longer than do ordinary bottom paints. Send for descriptive folder.



FOR METAL BOTTOMS

INTERNATIONAL has developed a combination of a primer and an antifouling paint that offers the maximum protection and preservation of metal bottoms. Send for the two circulars, "SILVER PRIMOCON" and "INTER-TROP".

International
BOTTOM PAINTS

International Paint Company, Inc.
21 West Street, New York 6, N. Y.
So. Linden Avenue, So. San Francisco, Calif.
1145 Annunciation Street, New Orleans, La.

International Paints [Canada] Ltd.
6700 Park Avenue, Montreal, Quebec
105 West, 2nd Avenue, Vancouver, B. C.

WORLD'S LARGEST MARINE PAINT MAKERS

SAN DIEGO BITE-SIZE ITEMS

HULL 306, steel tuna clipper, is ring completion at National Steel. l hull 307 has begun its creation another steel clipper, according to ip" Calkins, the yard's naval arch- ct . . . Sister ship *Dominator* was her way to port with a load of a in late February. *Cabrillo* is wait- unloading at San Diego . . . Art end, yard superintendent at Na- nal Steel, was in Peru as this issue nt to press . . . Bob Bennett of mpbell Machine Co. reports that erre Jangaard's *North American* s released from drydock early in arch, after extensive repairs for mage when she hit the shore of oint Loma . . . The *Charlene* was in mpbell's yard for a complete over- ul.

MR. AND MRS. GEORGE AMPBELL and Mr. and Mrs. Dave ampbell left San Francisco recently n the *Orsaba* for Honolulu, New ealand, Australia, etc. The two rothers recently sold the Campbell fachine Co. enterprise to a group f tuna boat owners. In New Zealand ney plan to call on Joe Silva, for- nerly of the *Glory of the Seas* . . . It's baby boys for Joaquin Qualin of the *Navigator* (the first boy—three girls) and Sam Crivello. Maurice Correia's newest arrival is a girl and it is also a daughter for Esmael Virrissimo . . . Joe M. Medina is back in San Diego from the Azores. Mr. and Mrs. M. O. Medina are reported to be planning a trip to Portugal . . . Crofton Co. has installed a Silvap (fresh water from salt) on the *Conte Bianco*. The same company has now set up at its location at the foot of G Street a dynamometer for testing horsepower on diesel engines . . . Kettenburg Boat Works has installed a new Chrysler Crown engine in the tender of the *Ronnie S.*

Minor Parker of the *Pearl* has forsaken fishing for a time. He is sales engineer for Eminger's Marine Radio at the Kettenburg Boat Works in San Diego. *Minor* will travel the Pacific Coast and Mexico selling Bendix depth sounders and a new attachment, the horizontal Echo Ranger. This equipment is being installed on the *Pearl* for demonstration purposes.

New Troller Launched

A new 36′ troller, *Margie Ann*, owned by A. V. Moore and Orville Dawson, of Brookings, Ore., was to be launched at Crescent City, Calif., early in March.

Moore and Dawson, loggers and Woodsmen, have been working on the craft at odd times for the last three years. The craft was designed by Hanson of Seattle and is costing about $10,000 to build.

The hull is of one and 1½″ planking, with protective shields on each side to overcome damage from hauling of gear, and has a metal groundplate along the keel. The boat sleeps two and is well equipped. The hold can take about four tons of iced fish and about three tons of live crab, kept alive in sea water pumped aboard with a 30-lb. pressure pump. She will be powered with a 95-h.p. Chrysler gasoline engine and will carry about 265 gallons of fuel.

Otto Carlson, veteran Columbia River Packers Association employee as fisherman, fish buyer, and later watchman, died Feb. 10 at an Astoria hospital, after a long illness. He was a native of Finland, aged 88 years.

* * *

Angelo Mineo, Monterey, has installed a 90-hp Universal Cruiser Six in his hook-and-line boat "Catherine." The engine was purchased from the Thomas A. Short Co., San Francisco.

CELEBRATING OVER 150 YEARS OF SERVICE TO THE FISHERMAN

For fast rigging and steady dependable service look to the rope with over one hundred and fifty years of unexcelled background . . . there is no substitute for the Fitler Blue and Yellow trademark of quality. For long life and flexibility Pure Manila rope is "Waterproofed" and "Mildew-proofed".

The Edwin H. Fitler Co.

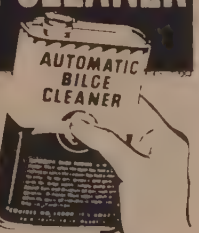
EST. 1804

Warehouse Stocks
Sold by Marine Supply Stores Everywhere

935 N. W. 12th Ave. Portland 9, Oregon
1736 East 15th St. Los Angeles 21, Calif.

AUTOMATIC BILGE CLEANER

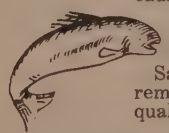
SAVES MONEY—AND LABOR



IN THE BILGE

LET THE ROLL OF THE BOAT CLEAN THE BILGE!

Reaches where nothing else can—gets all grease, slime, even underneath engines and floorboards. Cuts labor costs—no more scrubbing and scraping. For the first time your bilge will be really clean! **Ends Fire Hazard**—Mixes floating gas or oil with the water and keeps it emulsified so it's pumped out when you pump the bilge. **New deodorizing additive** kills odors (shrimp boats use it instead of pine oil). Protects caulking, harmless to paint, fittings, even hands.



KEEPS FISH HOLDS SANITARY

Saves time and money. Quickly and easily removes all gurry, avoids spoilage. Protects the quality of your catch.

CLEANS EVERYTHING ABOVE AND BELOW DECK

Automatic Bilge Cleaner fills ALL cleaning needs. Gull droppings, fish gurry quickly removed. Non-caustic—use it safely anywhere on the boat. Popular in galley—the perfect salt water soap for dishes, pots, pans, etc. Washes clothing, bedding, canvas, woodwork.

Low priced, Pint $1.29; Qt. $1.98; Gal. $7.50.

See Your Dealer Today or Order Direct

Dealers: Write for Special Offer

SUDBURY LABORATORY, Box 990, South Sudbury, Mass.

AMERICA'S No. 1 BILGE CLEANER

"POWERED BY MURPHY DIESEL"

means dependable service, minimum operating cost

"Powered by Murphy Diesel" — there's a statement you can be proud to make . . . because to fishermen everywhere, Murphy Diesel means good, solid power, the kind you can depend on and the kind that can make the difference between profit and loss.

Check with Murphy owners in your waters. They'll tell you better than we can what Murphy Diesel means in terms of economy, dependability and long life. Then ask your Murphy Diesel Dealer to show you just how Murphy Diesel can fill your needs.

MURPHY DIESEL COMPANY
5301 W. Burnham St., Milwaukee 14, Wis.
Propulsion engines and auxiliaries, 90 to 225 H.P., Generator Sets, 60 to 154 K.W.

A 190 H.P. Murphy Diesel powers the halibut schooner, "Jean D." She is owned by Ketchikan, Packing Company, Seattle.

MURPHY DIESEL

318

SEE YOUR MURPHY DIESEL DEALER, TODAY—

Seattle 7, Washington
ALASKA-PACIFIC SUPPLY CO.
2412 Market Street

San Francisco 9, California
OSWALD MACHINE WORKS
2936 Hyde Street

Vancouver, B. C. Canada
NORTHERN ENGINE & EQUIPMENT COMPANY (B. C.) LTD.
155 Water Street

SAN PEDRO SEINE SETS

VAN CAMP SEA FOOD closed NK tuna cannery at Terminal and for a few weeks in order to a new floor . . . To acquaint wives boat owners of the purposes of Fishermen's Cooperative Auxili-, a "coral tea" was held in Febru- at the San Pedro home of Mrs. orman Mezin. Committee members cluded Mmes. Paul Biazevich, John itanich, Vincent Budrovich, Anton isetich and Lawrence Zuanich . . . b Batinovich, son of the boat broker d insurance broker, Matt Batino- ch, has signed on as crew on the irse seiner *North Queen*, Capt. Andy itco . . . the *Lorraine A* has been ficially designated by the Bureau Customs as the *Janis M*. She is a irse seiner out of San Pedro. . . .

STAR KIST FOODS has trans- rred the *Excellent*, *Oakland*, *Vir- nia II* and the *Robin Hood* to hilean registry . . . Mrs. Nick Tru- nich, wife of the skipper of the *'estern Clipper*, fishing for the *Toni* on the high seas off South America, eports that when the seiner was seized by the Peruvians at Callao, her reason for entering the port was the illness of the cook, Sam Siskovich. The *Toni B* (lost soon afterward) was seized at the same time. The fines imposed by Peru were paid by Nick Bez of Seattle, who operates the freezership.

SAN PEDRO in 1954 again topped San Diego as U.S. fish port in quantity and value. Gloucester, Mass., took second rank.

THELMA Kay, 50-footer owned by Frank Scognamillo, was lost in February when she ran on the rocks in the fog near Point Vicente, San Pedro. The skipper and six crewmen were picked up by the *Santa Maria*. The *Thelma Kay* was on her first trip for mackerel, following settlement of price . . . Harbor Boat Building Co. has replaced the steel brine tanks of the *Marauder*, under repair after hitting the breakwater of San Pedro harbor, with plywood tanks covered with reinforced plastic (fiberglass and resin) . . . Jeffries Boat Works, Venice, Calif., is building two new patrol boats for the California Fish and Game.

First "Estevan Deep" Petrale Landed Mar. 7

First trip of petrale sole from the newly-discovered "Estevan Deep", southwest of Estevan Point, Vancouver Island, was landed at Seattle March 8 by Capt. Carl Serwold's *Tordenskjold*, which sold 35,000 lbs. to Main Fish Co.

The initial trip from this new ground came-in some weeks later than last year. Actually, there had been a few petrale landed from the deep during January and February in connection with substantial ocean perch trips taken in the trench, but these quantities were of little significance and it was not until the *Tordenskjold* found fish that any significant quantity had been landed.

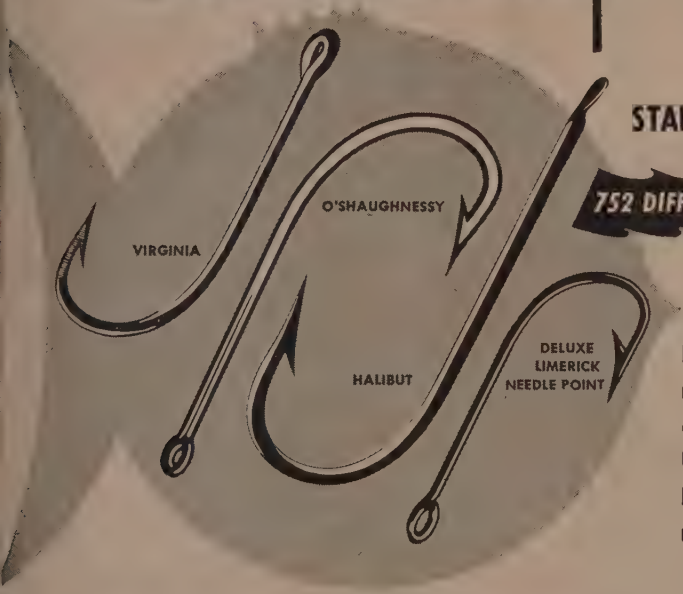
When Capt. Serwold reached the long, narrow deep there were two boats fishing. When he left, 15 had their gear down, and more were arriving by the hour.

James G. Putters, 71, retired fisherman, died Feb. 27 at the home of a friend near Redondo Beach, Calif. He had lived in Southern California since 1918.

PFLUEGER HOOKS

STANDARD OF FISHERMEN EVERYWHERE

752 DIFFERENT TYPES AND SIZES REGULARLY STOCKED



You can depend on Pflueger Hooks to give long service. They're made of the toughest steel, finely tempered to hold shape and finish. Made in U.S.A. by third generation of Pfluegers. Demand Pflueger hooks and you'll catch more fish.

THE ENTERPRISE MANUFACTURING CO., AKRON, OHIO
90 YEARS OF MAKING FINE TACKLE

PFLUEGER (Pronounced "FLEW-GER") MADE IN U.S.A. A GREAT NAME IN TACKLE

HIGH GLOSS! HIGH QUALITY! HI-TEX

This high gloss, color-fast enamel protects against all marine elements. Applies with ease to a self-leveling, mirror-like finish.

AMPCO
A TRIPLE C PRODUCT

At your boatyard or dealer.

AMERICAN MARINE PAINT CO.

TOWER'S
"FISH BRAND" NEOPRENE

Never before have waterproofs afforded the protection given fishermen by

TOWER'S NEOPRENE HOODED SHIRTS and PANTS

In addition to providing solid comfort, roominess, and durability, **TOWER'S NEOPRENE** waterproofs give special protection against oils, greases and ordinary acids. Hoods attachable to regular jackets may be purchased separately if desired.

For those not requiring the extra protection given by Neoprene treatment we suggest **TOWER'S "FISH BRAND"** oiled or **"ARROW BRAND"** rubber garments. Styles available include jackets, pants, hooded shirts, coats, aprons, sleeves and hats. All good dealers carry these items or can get them for you.

For folder of styles and detailed information write Department **PF.**

NEOPRENE *RUBBER*

TOWER'S FISH BRAND

A. J. TOWER CO.

24 SIMMONS ST. BOSTON, MASS.

TOWER'S ARROW BRAND

✓ now...
Check Universal Prices!

By all means, check the price and check the quality. In both cases, Universal Marine Motors are in your favor

Buy your new marine motor now. The time and prices were never better. See for yourself . . . see your Universal dealer.

Remember, Universal is the complete line. 1 to 6 cylinders, 8 to 145 horsepower. Also marine battery chargers and generating sets. Write for literature, low prices.

UNIVERSAL MOTOR COMPANY

423 Universal Drive • Oshkosh, Wisconsin

Seattle: Pacific Marine Supply Co. - San Francisco: Thomas A. Short C
Los Angeles and San Diego: Shepherd Marine - Honolulu: McWay
Marine Supply Co. - Prince Rupert and Victoria: Edward Lipsett, Lt
Vancouver: Lipsett Engine & Mfg. Co. Ltd.
Coos Bay, Oregon: Elfving's Marine & Builders Supply
Portland: Lee McCuddy's Columbia Marina

SAVE UP TO 50%!
On Your Battery Requirements

Our rebuilts are assembled with all new heavy duty plates and rubber separators, the same as our new batteries, except we use your case.

New Battery Guarantee!

Write for prices, giving voltage and outside dimensions of case.

Work completed in 2 to 5 days, depending on size.

Keystone Batteries, Inc.

Manufacturers of New and Rebuilt Diesel Batteries

1695 Galvez Ave., San Francisco 24

Phone: MIssion 7-3034

STARR NETTING...

the best then - the best now!

or over half a century, Starr Netting has maintained the highest quality in dependable commercial fish netting.

Always in step with modern developments, Starr has set new industry standards having pioneered the use of synthetics in fish netting backed by long experience, the latest equipment and research methods.

A. M. STARR NET CO.
EAST HAMPTON, CONNECTICUT

ngineer Drowned ff Coral Sea

Andrew Stanovich, engineer on the *ral Sea*, San Pedro, was drowned ile the boat was unloading mackerel Terminal Island in February.

He was last seen about 7 a.m., work- on the skiff at the stern of the ssel. Thirty minutes later, when aptain Tony Barcott pulled away m the unloading dock, he was missing. His body was found later. He was a native of Astoria, and had served as an officer with the U. S. Maritime Service in World War II.

"Seattle's" Owner Dies

Anton K. Eliasen, owner of the Seattle halibut boat *Seattle* and a longtime member of the Fishing Vessel Owners Association, died March 5 after a short illness.

Capt. Eliasen was a native of Norway, 75 years of age. Starting as a logger, he came to the Puget Sound country early in the century, and a little later engaged in fishing; being a partner in the construction of the halibuter *Orient* in 1911. He is survived by a son, Eilert Eliasen, of Bainbridge Island; a brother in Norway, and two grandsons.

THE HOUSE OF FRIENDLY SERVICE
NORDBY
SUPPLY COMPANY

HALIBUT FISHERMEN!

You'll find Nordby's facilities at the Fishermen's Dock unsurpassed at outfitting time . . . with complete stocks of everything you need.

- ★ WALL'S Buoy Line
- ★ MITTET and WICKS Gear
- ★ SCOTT'S Buoy Lights
- ★ MUSTAD Halibut Hooks
- ★ Foulweather Clothing
- ★ Floats of All Types

Clean Up With PETTIT Marine Paints

1300 WESTERN AVE., EL 1364
SEATTLE 1, WASHINGTON

FISHERMEN'S DOCK
SEATTLE 99, WASHINGTON

Headquarters for Fishermen

PIONEERS in the DEVELOPMENT of BETTER PURSE SEINE EQUIPMENT

THE ONLY COMPLETE MANUFACTURER OF PURSE SEINE REELS AND FISHING EQUIPMENT

(1) Design and layout custom engineered for your boat
(2) Complete shop and installation facilities
(3) Quality and dependability always
(4) Backed by actual fleet experience

Manufacturer of Akervick Gurdies and Trolling Equipment
Drydocking, Repair and Side tracking Facilities
Design, Construction and Repair of Steel and Wood Commercial Vessels

MARINE CONSTRUCTION AND DESIGN CO.
2300 COMMODORE WAY • SEATTLE

★ SELLING & BUYING ★

10c a word per time, $3.50 minimum. (For box numbers addressed to PFN, add $1.00.) Business card display—$16.50 per column in. per insertion, with lower rates on contract basis. Mail all copy to PACIFIC FISHERMAN'S NEWS, 71 Columbia St., Seattle 4, Washington.

FOR SALE: 38' Kettenburg, 2-71 GMC (3:1) 12 T. Refrig., S.S., R.D.F., Fath. Pilot. One of the best $14,000. 51' Steel Troller, 80 H.P. Atlas, Radio and D.F., 25 Ton, 2400 fuel, Blt, '47 $16,500. 40' x 12' x 5'6" New Monk Design Dbl. End Hull, Complete with tanks, cabin, shaft, wheel. 10 Ton Hold. 1¼" Planking 1⅝" Deck. Many extras $6500. 68' Seiner, '47, 180 H.P. Washington, Hercules 45, Both Purse & Drag Winches, Power Skiff Air Hoist 93 Ton Sardine. 65 Watt Northern, Pilot, R.D.F. $36,500. FRANK SIMON ASSOCIATES, P. O. Box 834, Berth 205A, Wilmington, Calif. TE 5-3101.

JERRY'S BOAT SALES. For any type or kind of boat or ship. World-wide contacts. Matt Batinovich, owner and broker, New location: 310 West 7th, San Pedro, Calif. TErminal 3-4482.

FOR SALE: Boat "Ardie" 48x14, Monk Design '47. 23 Ton net. 80 Cat. Phone, DF, Fath, Pilot, etc. Top Notch and full equipment salmon, tuna. $25,000. Write O. K. Lokken, Stanwood, Wash.

FOR SALE 105' power barge, two Caterpillar D 1700 engines, recently overhauled, house over cargo deck, registered 185 gross tons, excellent condition. Suitable for freezer, freighter, cannery, etc. Easy terms. See boat "Chief", Fishermen's Terminal, Seattle 99, Wash.

FOR SALE: Buda diesel, Model 844, 130-hp., 1200 rpm, 3:1 Twin Disc reduction. Good condition. 13', 3" Monel shaft, used one season; 38x33 propeller, stuffing box and intermediate bearings. $1850. Frank Simon, Box 834, Wilmington, Calif., TE 5-3101.

BUY Surplus direct from Government. Boats, motors, amphibious craft, truck, trailer, jeep, tools, machinery, radio equipment. Hundreds others. Send $1.00 for Government Surplus Bulletin to The Abacus Press, Box 169 PC, East Hartford 8, Conn.

We are interested in purchasing an "Alaska Limited" vessel or other type good purse seiner 55' to 65'. First class condition, ready for immediate operation. State price, full description, send photos, layout, etc. Box 307, Pacific Fisherman's News, 71 Columbia St., Seattle 4, Wash.

FOR SALE—Commercial fishing boat 48' x 13'10" x 5½', Monk design, steel hull, fuel cap. 2200 gal., water 500 gal. Gross tonnage 31, sleeps 6, completely equipped, priced right. C. M. Negstad, 943 Solano Ave., Albany, Calif.

See our 33' gillnetter. Designed for the Puget Sound and built to Western Boat Building Co.'s best standards. Also a 36' model on the drawing boards. Western Boat Building Co., 2505 E. 11th St., Tacoma, Wash. Telephone BRoadway 4278.

FOR SALE: Deep sea troller "High C" 45' x 13'4" x 7'9". Built 1952, 19 tons net. Ideal for seiner, halibut or tuna, 6 cyl. GM Diesel, radio, D.F., Iron Mike, Fathometer and repeater, Hydraulic anchor winch and gurdies. May be seen at Poulsbo, Wash. Reasonably priced. Will send pictures and further details on request. Leif Ness, P. O. Box 158, Poulsbo, Wash. Phone, Poulsbo 610.

FOR SALE OR LEASE: Modern salmon cannery in biggest producing area on Puget Sound. Crab and bottom fish available. Write Box 293, PACIFIC FISHERMAN'S NEWS, 71 Columbia St., Seattle 4, Wash.

FISHING BOATS FOR SALE: Trollers and Monterey Purse Seiners. DON WOODWARD, Boat and Real Estate Broker, at Marine Supply Store, PO Box 45-A, MOSS LANDING, California. Telephone CASTRVILLE 6652; or apply at OAKLAND ESTUARY BRANCH, Don Woodward, Jr., Manager, care Evans Radio Dock, 901 19th Avenue, Oakland, California; Telephone KEllog 2-8158.

FOLLOW the FLEET to SUN HARBOR MARINA, 5104 Harbor Drive, San Diego, ACademy 2-1291. M. B. "Curly" Parke, the Fisherman's Broker. Commercial boats, all types.

LAST CHANCE!
They're Getting Scarce!
Surplus Graymarine (GM) 6-71 diesel engines. Reconditioned, modernized, with wide range of reduction ratios. Fully guaranteed.
COMPLETE STOCK OF PARTS
HALL-YOUNG CO.
366 Jefferson St., San Francisco
Fishermen's Wharf
Phone: PRospect 6-5520

Your headquarters in SAN PEDRO
Seaside Supply Stores, Inc.
ADAMS NETTING
Commercial Fishing Supplies
803 S. Palos Verdes TErminal 2-7297

In Southern California
NORDBERG
GAS ENGINES
H. G. McKINNEY & CO.
Berth 192 TErminal 4-1473
Wilmington, Calif.

GOT GENERATOR TROUBLE?
See us NOW for Generator and Regulator Repairs and Installation, BENDIX Pilots and Depth Indicators.
MERCURY MARINE ELECTRIC
2905 Jones St., Fishermen's Wharf
Phone: TUxedo 5-5413 San Francisco

DIPPING TANKS
ANY SIZE LAMPARA NET
Green, Black, Tan
ELECTRIC HOISTS
T. V. CARTER CO.
1301 W. 11th St. Long Beach, Cal.
L. B. 7-3019 L. B. 7-4508
Net Work of All Kinds

FORSTER
SHIP BUILDING CO., INC.
SHIP BUILDERS — ENGINEERS
MARINE WAYS — REPAIRS
Foot of Ferry St. Terminal Island
Phone TE 2-4527

Adams American Netting Tubbs Cordage
Pabco Marine Paints
A. D'ACQUISTO & SONS
FISHERMEN'S SUPPLIES
COMPLETE TROLLING EQUIPMENT
Phone: 2-4110
Municipal Wharf, Monterey, Calif.

GM DIESEL POWER
General Motors
Installations
SALES - SERVICE
SHORE LINE DIESEL
MAINTENANCE
Pier 47, Ft. of Jones St., San Francisco
Phone: Graystone 4-2873

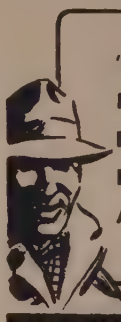
Detroit Diesel Appointments

E. F. Bentley, general sales manager of Detroit Diesel Engine Division of General Motors, has announced the appointment of R. L. Burpee, formerly sales promotion manager, to the newly created position of merchandising manager. Succeeding Mr. Burpee as sales promotion manager will be T. L. Guarniere, whose former position as service training director will be filled by Harold J. Vaughn.

Jerry's Boat Sales Moves to San Pedro

Matt Batinovich, owner and broker of Jerry's Boat Sales, announces that the company has moved to a new location. Formerly on Terminal Island, the new offices are located at 310 W. 7th St., San Pedro, Terminal 3-4482. Matt recently sold the "Buccaneer" for Robert Steel to Robert Bailey.

Liberty Bell II, purse seiner of San Pedro, has a new 23' plywood skiff, powered with a Chrysler Ace, built by the Al Larson Boat Yard, Terminal Island.


"IMPORTANT TO FISHERMEN — PARTS FOR WASHINGTON DIESELS ARE ALWAYS AVAILABLE"
WASHINGTON DIESEL

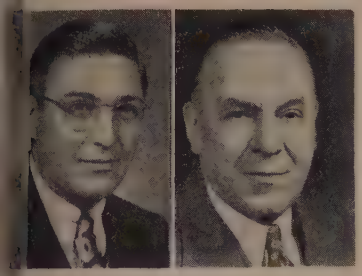
CHRIS-CRAFT ENGINES
MICHIGAN WHEELS
APELCO
DIRECTION FINDERS
BRYANT'S Marina
1117 E. NORTHLAKE ME 0090
SEATTLE

A name fishermen have trusted for more than 30 years
AL LARSON BOAT SHOP
General Machine Repair Work
Boat Builders
Terminal Island, Calif. TE 2-4521

DOC FREEMAN'S
MARINE ENGINES EQUIPMENT HARDWARE
New Chrysler Royals built up from new block and all new parts with any reduction gear, $900. New 12-volt 55 amp. generator with regulator 1125 RPM. $75. 30 lb. Danforth Anchors, $20.
999 Northlake Ave. EV 1500 Seattle

COMMERCIAL FISHERMEN
In Mexican-Central American Waters
PACIFIC TOWBOAT & SALVAGE CO.
Offers Standby Salvage and Towing Service
Pier "D", Berth 35 Long Beach 70-6487
Long Beach 2, Calif. Cable Address: PACTOW
"KANAK"—WA 6710

LINES and LEADERS



...on E. Knudsen, left, general manager of ... Detroit diesel division of General Motors, ...eeding William T. Crowe (right) who is retiring after 35 years with G.M.

...udsen Succeeds Crowe ...G-M Diesel Division

...arlow H. Curtice, president of General ...ors, recently announced the appoint... ...t of Semon E. Knudsen as general ...ager of the company's Detroit diesel ...sion, succeeding William T. Crowe, re... ...g after 35 years in G-M service.

...r. Knudsen, who has been with Gen... ...t Motors since 1939, spent the last two ...rs in the company's Allison division at ...ianapolis, lately as manufacturing man... ...r for aircraft engine operations. He is ...ember of the American Society of Tool ...ineers and the Society of Automotive ...ineers. He is son of the late Wm. S. ...udsen, president of G-M from 1937 to ...0.

...r. Crowe was general manager of the ...roit diesel division from its formation ...1938 to March 1 last, and under his di... ...tion that division became the largest ...clusive manufacturer of diesel engines ...America.

Fish Poisoning Licked by "Quartasan"

Nordby Supply Co., Seattle, exclusive distributors in Washington and Alaska for "Quartasan," a new "quaternary" cleansing germicide, are advised that this product has completely licked the problem of fish poisoning on the King crab trawler-freezer "Deep Sea," of Wakefield's Deep Sea Trawlers, Inc.

Capt. Wm. H. Blackford, master of the "Deep Sea," reports that the staphylococus infections on hands and wrists, known as fish poisoning, which formerly plagued the fishermen and others handling the crabs, have been unknown for the past year, during which they have washed their hands and arms daily with "Quartasan." He says, further, that daily use of "Quartasan" solutions in all processing spaces, after washing down with sea water, effectively prevents any odors usually associated with seafood processing. It is also used regularly in cleansing the stainless steel pans in which the crabmeat is frozen.

"Quartasan" is made by Ruson Laboratories, Inc., Portland, Ore.

Beebe Co. Named Distributor For Navicote Line

The Navicote line of marine finishes is now being distributed in the Pacific Northwest by The Beebe Company, 504 S. W. 1st, Portland, Ore., whose appointment as distributor for the state of Oregon was announced recently by Earl Huston, Jr., vice-president of Hart & Burns Co., Division of Devoe and Raynolds Co., Inc., manufacturers of the Navicote line.

The Beebe Company has been an established distributor of marine equipment since 1884, when Charles Beebe founded the company as a ships' chandler.

Tom Carine, Fort Bragg, has powered his 33' combination boat with a General Motors 4-51 diesel engine, purchased from and installed by **Bill Westfall,** West Coast Engine & Machine Works, Fort Bragg.

ADVERTISING INDEX

Albina Engine & Mche. Wks.	29
American Marine Paint Co.	52
Brownell & Co., Inc.	27
Bryant's Marina	54
Carter Co., T. V.	54
Chrysler Corp., Marine Engines	28
Classified Advertising	54
Columbian Bronze Corp.	45
Consolidated Net & Twine Co.	27, 53
D'Acquisto & Sons, A.	54
Detroit Diesel Div., General Motors Corp.	38
Edo Corp.	36
Enterprise Engine & Mchny Co.	44
Enterprise Mfg. Co.	51
Fitler Co., Edwin H.	49
Forster Shipbldg. Co.	54
Freeman, Doc	54
Freeman, Wood	55
General Motors Corp., Detroit Diesel Div.	38
Hall-Young Co.	54
Harbor Boatbldg. Co.	55
Harnischfeger Corp.	35
Hart & Burns, Inc.	47
Hatch & Kirk	55
Heminway & Bartlett Mfg. Co.	46
International Paint Co.	48
Kettenburg Boat Works	29
Keystone Batteries	52
Larson Boat Shop, Al	54
Marine Constr. Design Co.	53
McKinney Co., H. G.	54, 55
Mercury Marine Electric Co., Inc.	54
Metal Marine Pilot	55
Murphy Diesel Co.	50
N. C. Marine	55
Nordberg Mfg. Co.	56
Nordby Supply Co.	53
Pacific Towboat & Salvage Co.	54
Plymouth Cordage Co.	40, 41
Rudd & Cummings	45
Seaside Supply Stores	54
Shore Line Diesel Maintenance	54
Snow-Nabstedt Gear Corp.	26
Standard Oil Co.	42
Starr Net Co., A. M.	53
Sudbury Laboratory	49
Tacoma Boat Bldg Co.	29
Tower Co., A. J.	52
Tubbs Cordage Co.	78
Union Oil Co.	34
U. S. Rubber Co., Industrial Clothing	36
Universal Motor Co.	52
Washington Iron Works	54
White & Sons, Inc., Wilfrid O.	48
Woolsey Paint & Color Co.	30

CATERPILLAR
REG. U. S. PAT. OFF.

MARINE DIESELS — ELECTRIC SETS

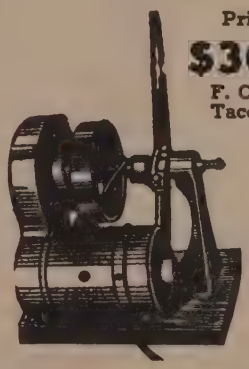
NC MARINE

Expert Mechanical and Electrical Service
Dockside Facilities on Lake Union

A DIVISION OF NORTHERN COMMERCIAL COMPANY
SEATTLE — 2560 Westlake Ave. N. — Alder 6700 JUNEAU KETCHIKAN

METAL MARINE PILOT
for True-Course Automatic Steering

Price **$300** F. O. B. Tacoma



Manufactured by
Wood Freeman
342 Golden Gate Ave., Fircrest
Tacoma 3, Washington
Phone PRoctor 2791

REBUILT G.M. — GRAYMARINE 3, 4, AND 6 CYLINDER SERIES 71 DIESEL ENGINES.

Fully reconditioned and modernized with choice of reduction gears, power take-off, etc. Write for descriptions and quotations for your needs.

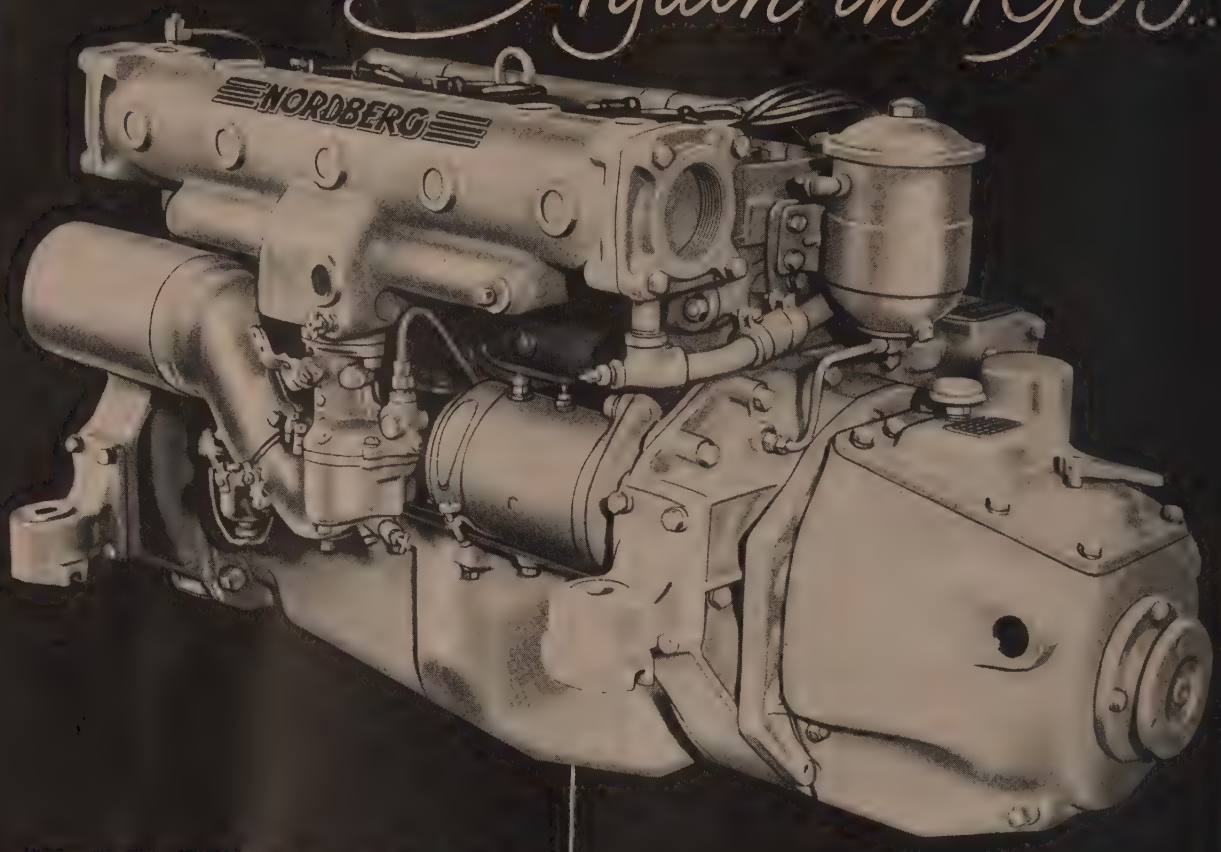
PHONE—HEMLOCK 2766
5111 LEARY AVE. SEATTLE 7, WASHINGTON

HATCH & KIRK — DIESEL SALES-SERVICE-PARTS — 5111 LEARY AVE. SEATTLE 7 WASHINGTON

In Southern California
CHRIS-CRAFT MARINE ENGINES
H. G. McKINNEY & CO.
Berth 192 TErminal 4-1473
Wilmington, Calif.

THE FISHERMAN'S YARD
24-HOUR SERVICE • REPAIRS
1000-Ton Drydock • Marine Railways Complete Shops
HARBOR BOAT BUILDING CO.
Fish Harbor — Terminal Island, California

Again in 1955..



NORDBERG

. . . still the Quality Name in the Marine Engine Field

In every one of the six rugged, dependable Nordberg Gasoline Marine Engine Models for 1955 you will find a long list of exclusive engineering and construction features that mean maximum fuel economy, minimum maintenance, and years of trouble-free service in the toughest kind of fishing operations.

Join the ranks of fishermen from coast to coast who have found Nordberg the *best* in Gasoline Marine Engine power . . . install a Nordberg in *your* boat.

NORDBERG MFG. CO., Milwaukee 1, Wisconsin

NORDBERG

NORDBERG MACHINERY

GASOLINE MARINE ENGINES

© 1955, Nordberg Mfg. Co. G155F

155 hp KNIGHT • 130 hp TARPON • 110 hp MARLIN • 110 hp BULLET • 95 hp ARROW • 95 hp B

akat Packing Corp. uys Anacortes Cannery

rchase by Nakat Packing Corpor-, salmon-canning subsidiary of Great Atlantic & Pacific Tea Co., e assets of the Anacortes Canning was announced in February by . Friele, Nakat president. This s the company's first entry into on canning operations on Puget d, though for many years it has canneries at Nakeen on Bristol and Waterfall, Ketchikan and len Inlet in Southeast Alaska. Jay arroll, head of the Anacortes con-, will continue for the present to ssociated with the operation in an sory capacity.

rincipal property involved is the ery at Anacortes, Wash., equipped a modern Continental canning for talls and one for halves, which be operated this year with no erial change. Don Franett, form- assistant superintendent at Water- has been transferred to Anacortes uperintendent. It is expected that e 16 purse seiners who have pre- sly delivered to this plant will con- e to do so, and the number may omewhat augmented; while about Alaska seiners that have been fishing for Nakat will also work on the Sound. Further, Mr. Friele says, it is expected that gillnet fish will be purchased from some former Bristol Bay fishermen who delivered to Nakeen before the introduction of power boats in that area.

The Anacortes Canning Co. succeeded the former Sanitary Fish Co.—an old-time concern, long headed by the late John D. Carroll, Jay's father—about 1931; its establishment being a well-known factor in Puget Sound operations since the early part of the century.

As for Nakat's Alaska operations this year, Mr. Friele says they will be on about the same basis as in 1954, at least in Southeast Alaska; with the Waterfall plant handling a joint operation for Nakat; Libby, McNeill & Libby's Craig cannery, and New England Fish Co.'s at Noyes Island, and Nakat's Hidden Inlet plant remaining shut down. This being a "Pink year" on Puget Sound, the Anacortes operation should provide Nakat with a very welcome supplement to the expected scant production of this species in Alaska.

lbur-Ellis' Seattle fice in New Home

Vilbur-Ellis Company is doing iness this spring in new Seattle rters, a modern building built for y the Port of Seattle at 2900 - 11th enue, S.W. This Harbor Island tion is hard-by the company's ehouse, mixing and blending plant.

. B. Mattson, manager of the Se- e office, reports that the company et for a decade, as it has a 10-year e from the Port of Seattle on the quarters, which were designed built specifically for its needs. e company had occupied quarters the Central Building, Seattle, for re than a quarter-century.

ckers Win Decision Bristol Bay Case

Long-pending suit by the Bering Fishermen's Union against a group Bristol Bay salmon canners, in- ving a total of about $50,000, was cided in favor of the packers late February by Judge Boldt of the eral District Court in Tacoma.

The suit was based on claims for 1952 season, when a demand of the union (representing resident fishermen on Bristol Bay) was met by granting a monthly wage in lieu of the "run money" customarily paid to non-resident fishermen. The results were unsatisfactory to the union, which brought suit for additional payments.

Alaska Vessels Leave After Union Agreement

First vessels of the 1955 Alaska salmon cannery fleet left Puget Sound ports March 7 and 8 for the Alaska Peninsula area—getting away about the usual time—closely following acceptance by the Alaska Fishermen's Union of a general agreement with the Alaska Salmon Industry, Inc.

The agreement covers all areas except Bristol Bay, for which terms are yet to be negotiated. Supplemental agreements were also to be negotiated for Chignik, Cook Inlet and Southeast Alaska; and a union vote was to be taken the following week on health-and-welfare provisions. Principal changes in the areas covered are an increase of $20 in monthly wages (mainly to tendermen and trapmen), and a 12c-an-hour increase in overtime.

Fish Divoteers Tie-up For April 15 Tourney

John McCallum, of McCallum-Legaz Fish Co., Seattle, new president of The Fish Divoteers, the organization of active golfers in the fish affiliated industries in the Pacific Northwest, has announced the appointment of the following committees for 1955:

Sponsors Committee — Palmer Olson, New England Fish Co., chairman; Gale Blasingame, Washington Fish & Oyster Co.; Bill Lee, Seattle Marine & Fishing Supply Co.; Robert Graham, P. E. Harris Co., Inc.; Walter Johnson, Halibut Producers Cooperative; Bob Ennis, North Pacific Seafoods; Glen Wicker, Green Bay & Western Railroad.

Entertainment — Walter P. Shiel, Jr., Walter P. Shiel & Co., chairman; Phil LeDuc, Fibreboard Products, Inc.; Dick Little, Morton Salt Co.

Tournament—Edward Verner, Leslie Salt Co., chairman; Al Ingraham, Pacific Marine Supply Co.; Robert Silver, Whiz Fish Products Co.; Chas. Sherriff, B. R. Anderson & Co.; Bill Eardley, Jr., Eardley Fisheries Co., Inc.; Bud Moore, Booth Fisheries Corp.; Pat Douglas, Skinner & Eddy Corp., Inc.; Bud Friele, Nakat Packing Corporation.

Handicap — Joe Brennan, Talbott Carroll & Co., chairman; Kenneth L. Williams, Dehn & Co.

Membership — John Lauc, Kayler-Dahl Fish Co., Inc., chairman; Gordon Davis, Oxenberg Bros.; Jack C. Pierce, Whiz Fish Products Co.

Publicity—C. L. Hillyard, Pacific Fisherman; Fred Geibel, Marine Digest; Norm McGregor, San Juan Fishing & Packing Co.

Other 1955 officers are Ralph Syverson, San Juan Fishing & Packing Co., vice president; Randall Beard, New England Fish Co., secretary; and Bill Frankland, Kelley-Clarke Co., treasurer.

Preparations are under way now for The Fish Divoteers' 17th annual spring golf tournament, which will be held Friday, April 15 at the Rainier Golf & Country Club in Seattle.

Peter A. Kuglis Dies

Funeral services for Peter Anthony Kuglis were held in San Pedro Feb. 21. He was president of South Coast Fisheries, Terminal Island, and a director of the California Fish Canners Association. He formerly owned the Star Fisheries. He was 59.

A native of Yugoslavia, he had lived in San Pedro 45 years. He leaves his widow, an aunt and a niece.

FAMOUS BOOTH FOODS

Success Formula for FISH STICKS

Downyflake AUTOMATIC EQUIPMENT *plus their* BREADER MIX *has helped us do a big job in Fish Sticks-gave us a delicious product . . with dependable quality control . . .*

. . . *Says Mr.* John Worthington
Quality Control Manager
BOOTH FISHERIES CORP

Downyflake

CAN HELP *You* TOO!

To the alert processor of breaded Fish, and Seafood, Downyflake's 36 years of leadership and know-how can be translated into greater profits.

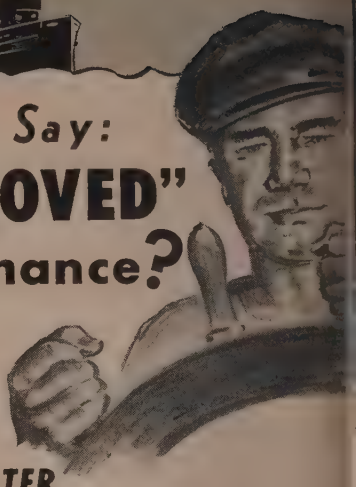
Profits are produced thru scientific production and quality control, uniformity, lowered production costs.

Downyflake automatic breading and frying equipment—coordinated with Downyflake Dip and Breader Mix—is the greatest scientific-engineering development in the industry's history.

Downyflake offers you the automatic equipment and the finest breader and dip to fit your product. Why not wire or write us and let a Downyflake Field Man survey your needs and give you the facts.

Downyflake BREADER MIX DIV.
Doughnut Corporation of America
45 W. 36TH ST N.Y. 18, N.Y.

1255 67th St. Oakland 8, California



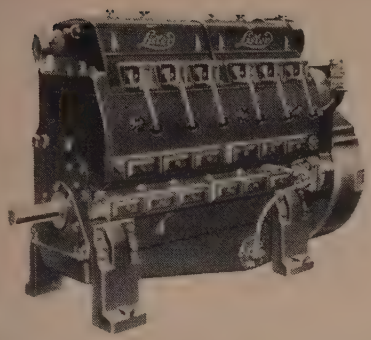
Did You Say: "IMPROVED" Performance?

LISTEN MISTER,

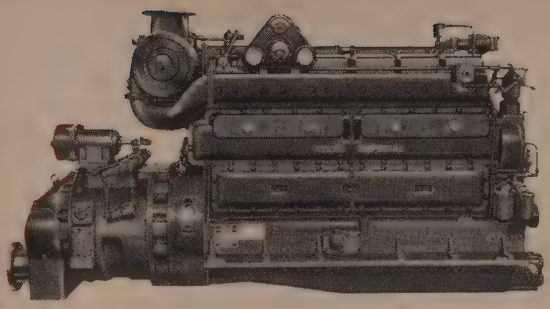
if your boat has any consid able amount of vibration, when you chang to a FEDERAL VIBRA-FREE 5-blader you'll know that "improved" just doesn't begin describe how much better your boat performs . . . you will enjoy almost unbeli able smoothness, added speed, better steering and a very real saving in fuel. Usually no change in diameter or pitch is required and the cost is just a little more than a standard 3-blade wheel. See your FEDERAL dealer or write to us for furt details.

made in two seri
20" thru 24" d
34" thru 60" di

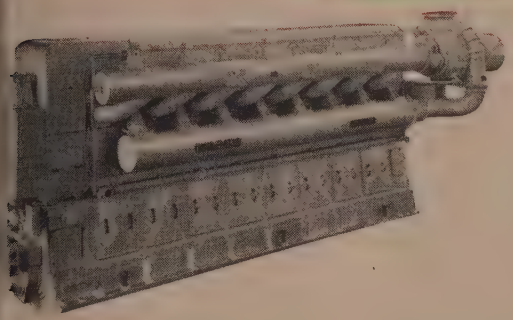
FEDERAL PROPELLERS GRAND RAPIDS 3, MICHIG



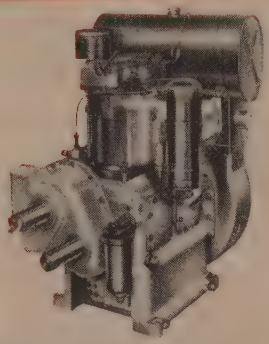
ISTER DIESELS, from 1 to 6 cylinders and in a 9 to 54 orsepower range, are exceptionally compact, quiet run- ng and easy to service. With a Lister on board, you can ely on economical power for propulsion, electric power, efrigerating machinery, fire and bilge pumping and a host f other applications.



ATLAS DIESELS are available in 4, 6 and 8-cylinder models, naturally aspirated or supercharged, conservatively rated in a range of 100 to 1000 horsepower. Top operating economy is attainable with these precision-built engines, designed to match medium horsepower needs in single and matched-pair installations.



SUPERIOR DIESELS, for medium and larger horsepower needs in single or multiple units, are available in 6 and 8-cylinder models, naturally aspirated or supercharged, and rated in a range of 215 to 1765 horsepower. Their sturdy, simple construction permits high output in a minimum of space and assures years of trouble-free service.



ARMSTRONG SIDDELEY DIESELS, available in single and twin cylinder models, are air-cooled diesels in a 6 to 22 horsepower range. Air cooling permits these sturdy, compact engines to be used under a variety of operating conditions with maximum efficiency, long life and minimum maintenance costs.

MODERN HEAVY-DUTY ENGINES for true economy in marine power!

Here are just four representatives of the quality engines in National Supply's complete line of Superior, Atlas, Lister and Armstrong Siddeley Diesels—for every propulsion and auxiliary need.

Whenever and wherever you put these conservatively rated engines to work, you'll get true power economy in:

- **Lowest fuel and lubrication costs**
- **Longer service life**
- **Minimum maintenance and repairs**

The hundreds of case history records in National's files are firm proof of these benefits. Ask to see them at any one of our 20 sales and service points from Massachusetts to California.

DIESEL
AL FUEL
GAS

DISTRIBUTOR OF Lister DIESELS IN U.S.A.

THE NATIONAL SUPPLY COMPANY

ENGINE DIVISION PLANT AND GENERAL OFFICES: SPRINGFIELD, OHIO

SALES AND SERVICE POINTS: Gloucester, Massachusetts • Houston, Texas • Fort Worth, Texas • San Diego, California Oakland, California • Terminal Island, California • Ketchikan, Alaska • Washington, D.C. • Chicago, Illinois • Portland, Oregon • Astoria, Oregon • Casper, Wyoming • St. Louis, Missouri • Halifax, Nova Scotia • Vancouver, B. C. • Park Rapids, Minnesota • New York, New York • Seattle, Washington • New Orleans, Louisiana • Pittsburgh, Pennsylvania

BODEGA BAY FISH STICKING operations of Meredith Fish Co. are pictured here, with Frank Lucido, upper left, examining one of the Ocean Beauty packages frozen in the plant's plate freezer. Sawing and breading operations are shown in the middle panel, while the frying and packaging processes and equipment are pictured at the bottom.

How Meredith Fries Fish Sticks in Bodega Bay Plant

• Northern California is on the fish stick band wagon with at least two plants operating, and two more preparing in the area, with rumors of still other plants flying like batter on a busy day.

Approximately 9,000,000-lbs. of fish sticks were produced in the United States during the first quarter of this year. This exceeded by 1,250,000-lbs. the entire output last year.

It is estimated that the total output for 1954 will exceed 40,000,000-lbs. One of the companies helping to produce this whopping total is Meredith Fisheries, with headquarters in Sacramento and a plant at Bodega Bay.

Meredith's fish sticks are made from true cod, produced in the Puget Sound area and shipped fresh via reefer truck from Seattle to Bodega Bay. The shipments come in 7,000 or 10,000-lb. lots. Some local caught sole is used also. The fillets for sticks are packed into 7-lb. Fibreboard cartons and frozen in a plate freezer which has 1,200-lb. per hr. capacity.

The 7-lb. blocks are taken from the holding room, and they are saw up on a band saw into 1-oz. piec

The 1-oz. pieces are then dipp by hand into a batter made from Mo ern Maid breading material, and th again dipped in dry Modern Ma breading. The batter is contained a stainless steel tank of about 30-g capacity.

The breaded sticks are cooked an automatic frying machine design by Mr. Lucido and built by him a Bert Bean, a local mechanic, of sta less steel. The cooker is 16″ wide, 3 deep, and the conveyor is eight' lo

The Durkee frying oil is heated four 12,000-watt heating elemen Capacity is about 40-gal. of oil.

The sticks travel on a convey made out of stainless steel ro through the cooking oil for 1¼-mi and continue up the conveyor for a other minute, draining. The fish stic cook at the top of the fryer, and a picked up by the slowly traveling co veyor.

A lip in the cooker tank catch the surplus oil as the sticks drain the conveyor and the oil is return to the cooker.

The sticks are then placed by ha on to stainless steel trays, and tak to a packing table where they a packed by hand, 10 sticks in 10-o butterfly consumer cartons, provid by Fibreboard Products, Inc.

The filled cartons are then plac on a conveyor belt and taken to Warp Master hand wrapping machi This machine is built by the Schoo Mfg. Co., Burbank, Calif. The c tons are first wrapped with an attra ively lithographed wrap around lab and then wrapped in cellophane. T labels show the fish sticks in natu colors on one side, and give compl cooking directions on the other.

From the wrapping machines, t cartons are taken and packed in tr and put into the plate freezer a frozen.

The consumer packages are th packed 12 to a case in Fibrebo shipping cartons.

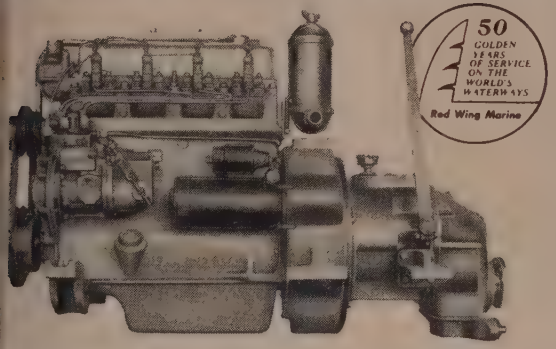
About 500-lbs. of fish sticks p shift are produced by Meredith Fi eries, and they are marketed un the *Ocean Beauty* brand.

Meredith Fisheries also pa breaded but uncooked fish sticks an institutional pack, in 3-lb. carto provided by Paperbox Corp., O land.

For institutional use also, Mere Fisheries breads 2-oz. fillets of h and packs them in 3-oz. Paperb cartons, after being dipped in Mod Maid batter and then in dry bread mixture. They are then placed

They're both winners because they're powered by

Red Wing Diesels



BEST FOR THE LEAST *for 50 years!*

Yes, work or play, Red Wing diesels can save your day! Ranging from 45 H.P. to 200 H.P. these great engines deliver safe, dependable power under any and all conditions, at lowest prices anywhere! They embody latest features for better performance, more speed, more economical operation with the lowest weight possible! Great for all craft where day-in, day-out dependability is needed!

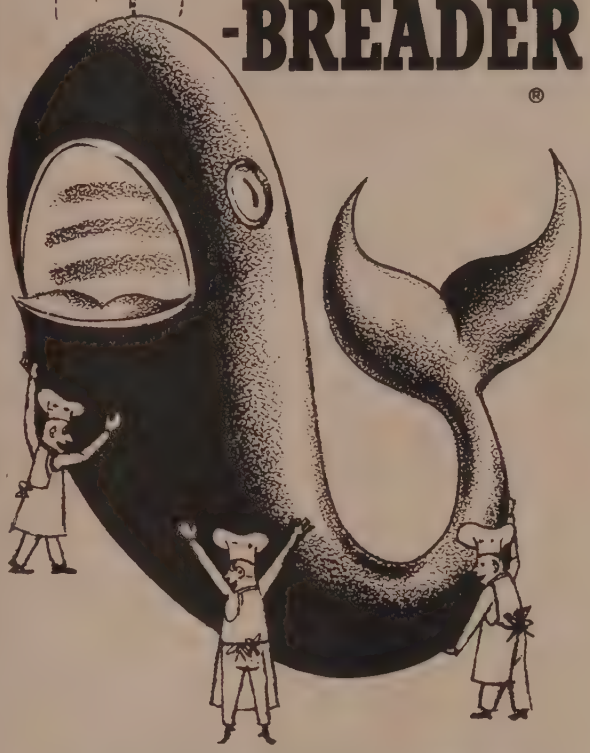
DEALER INQUIRIES INVITED

Get all the facts on Red Wing Diesels
WRITE TODAY TO:
DEPT. B-3

COMPARE THESE PRICES:		
D4-45	D6-100	D6-140
4 Cylinder	6 Cylinder	6 Cylinder
3½" x 3¾"	4" x 4"	4¼" x 5"
144 Cu. Inch	302 Cu. Inch	426 Cu. Inch
$1,995.00	$3,192.00	$3,992.00

Red Wing Marine
Division of Red Wing Motor & Manufacturing Co.
1000 LEVEE ST. • RED WING, MINNESOTA
GO PLACES WITH RED WING!

Before You Bread Anything, ask MODERN MAID about REDI-BREADER®



REDI-BREADER and All Purpose Batter Mix.

The Perfect Combination For All Sea Food To Be Breaded, Frozen or Fried

- **Assures waste-free processing of all Sea Food**
- **Mixed fresh to your order and shipped same day from our plant to you**
- **Packed in heavy duty fibre drums for maximum protection during shipping, storage and use**

Write For Special Formulations and Other Technical Data

MODERN MAID CONSULTANTS GIVE FACTS ON AUTOMATIC EQUIPMENT:

Modern Maid service provides processors with the latest information about all phases of breading, freezing and frying. Modern Maid will send its field consultants to your plant to give you the facts on breading and any automatic equipment you may need to insure maximum quality and production at lowest cost.

BREADING FISH STICKS? Ask about REDI-BREADER FORMULA 77
See us at Booth 40 - NFI New Orleans - April 24-27

Member NFI, Shrimp Assoc. of the Americas, NFFDA

MODERN MAID BREADING MIXES
110-50 Dunkirk Street Jamaica 12 New York

Represented by: Brown Brokerage Co., Los Angeles; Ivar Wendt, Seattle; Wyman Foorman Co., San Francisco.

Fibreboard shipping cartons.

For a number of years the company has packed a 1-lb. frozen consumer package of fillet of sole, rock cod, salmon, swordfish and ocean perch at Bodega Bay under the *Ocean Beauty* label, and these are wrapped on a Hayssen automatic wrapping machine in Western Waxed Paper frozen food carton overwraps.

Another specialty that Meredith packs at Bodega Bay is breaded fantail prawns in 10-oz. consumer packages. These are breaded by hand in Modern Maid batter and breading material and packed by hand in Paperbox Corp. cartons. They are frozen in the plate freezer and packed three dozen to the carton in Fibreboard shipping cases.

The company has also put out a pack of local-caught California shrimp packed in vacuum in plain 5-lb. cans.

Crab meat is packed in season in vacuum closed American Can Co. lithographed cans, both 5-lb. institutional pack, and 1¼-lb. consumer pack, under the *Ocean Beauty* label.

Still another specialty of the Bodega Bay plant of Meredith Fisheries are shrimp, crab and seafood cocktails. These are packed in 3¼-fluid oz. Glass Container glasses which are reusable as water tumblers. Lithographed caps come from Glass Containers, also.

First the glasses are sterilized. Then the cooked shrimp, crab or shell fish is added and the sauce which is also cooked is added last. The vacuum caps with the lithographed *Ocean Beauty* label are put on by an Anchor Hocking closing machine. This pack is put up entirely by hand. Finally the containers are cooked in water at 190° for 15 minutes. Each container is coded.

The special sauce for the cocktails was developed by Mr. and Mrs. Lucido. Sauces for all three specialties are each slightly different in flavor.

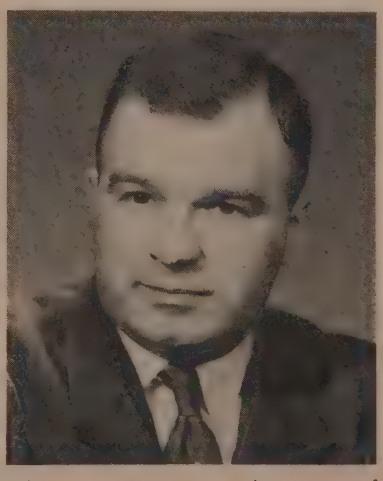
Mr. Lucido has been with Meredith Fisheries for the past 17 years, 16 of those at Bodega Bay. General manager of Meredith Fisheries is Lloyd Turnacliff who makes his headquarters in Sacramento.

R. L. Payne to Manage J. H. Todd & Sons

Robert L. Payne, until recently marine superintendent of Canadian Fishing Co., has been appointed general manager of J. H. Todd & Sons, pioneer British Columbia fishing and packing organization, succeeding P. E. Paulson.

Although at 35 "Bob" Payne is the youngest top executive in British Columbia's fishing industry, he has had abundant experience and first-rate training for the important duties he has assumed as director of the Todd activities all along the British Columbia coast from Sooke to the Skeena.

Son of the late R. R. Payne, who for many years was production manager of The Canadian Fishing Co. and one of the most popular figures in the industry, young Bob spent his vacations in the fish camps along the coast, starting as a lad of 13 as a cook's helper. He was an assist cannery lineman one season, a st keeper during another; in fact th were few jobs he didn't fill until ally they gave him a regular assi ment in the drafting office in V couver in 1939. Then the war ca along to interrupt his association w the industry and for two years served in the merchant navy.



Robert L. Payne, new general manager of J. H. Todd & Sons, pioneer Canadian salmon company.

The war over, Bob went to Mc University and on graduation given the post of marine superin dent of The Canadian Fishing C where he showed such aptitude he was chosen for a special co at Massachusetts Institute of T nology to round out his technical cation and prepare him for a m important job when it came al He was just about as surprised as a one else when the job turned ou be with another company—J. H. T & Sons.

Few fishing companies have b operating as long in the North Pa as J. H. Todd & Sons, which was important factor in the industry years ago during the first boom years on the Fraser River. Four g erations of the Todd family serve as president or in some other ca ity, although none of the Todd active in the company's managem today. From its inception the c pany's head office was in Victo but its last link with the British umbia capital was severed a year when the offices there were cl down and the executive and acco ing branches were concentrated Vancouver. The company has o ated in close association with Canadian Fishing Co. and B.C. P ers during the past year.

Although all its plants may no active, the Todd organization diversified facilities at Inverne the Skeena area, at Klemtu, R Inlet, Richmond on the Fraser, Sooke traps, and the old Empire nery at Esquimalt, now being mantled. In addition, the company a limited fresh fish operation on west coast of Vancouver Island. operating program for 1955 has to be determined.

Radio Equipment Requir On Japanese Gillnetters

In allocating salmon gillnet l for North Pacific and other o fishing operations, the Japanese ery Agency is requiring that each be equipped with telecommunic apparatus, including ultra-short sets (now appearing for the first in the Japanese "North Sea" fish and spare source of electricity.

LEAR

...greatest name in aircraft Automatic Direction Finders...

now offers a

MARINE ADF

- *Automatic* and *continuous* bearing indications — ship-to-shore and ship-to-ship. Simply tune and read the visual indicator.
- No manual hunting for that elusive aural null. Lear ADF bearings are *visual, positive,* and *accurate.*
- No clock watching to catch a radio beacon broadcast — the ADF indicator responds whenever the station is on the air.
- Saves time and fuel — you can pinpoint your position and navigate in a straight line.
- Rugged seagoing components — simple to install and maintain.
- Positive, accurate, and steady bearing indications — unaffected by rough water.
- Tuner and amplifier transformers and electrically driven loop all hermetically sealed.
- Illuminated three-band shutter-type dial — 190-430 kc; 500-1150 kc; 1150-2850 kc.
- 360° rotatable indicator (no ambiguity) — electrically operated for smoother response and greater accuracy.
- Aircraft quality direction finding and radio reception — exceptional sensitivity, selectivity, and intelligibility.

JUST TUNE

AND READ

IT'S AUTOMATIC

See your nearest marine dealer or write for complete information to Lear Inc., LearCal Division 3171 South Bundy Drive, Santa Monica, California

LEAR LEARCAL DIVISION

Nylon Nets Effective On Barracuda and Sea Basses in California

Several marine supply firms in the Los Angeles harbor area are reporting an increasing use of nylon netting by gillnet boats fishing barracuda and sea bass.

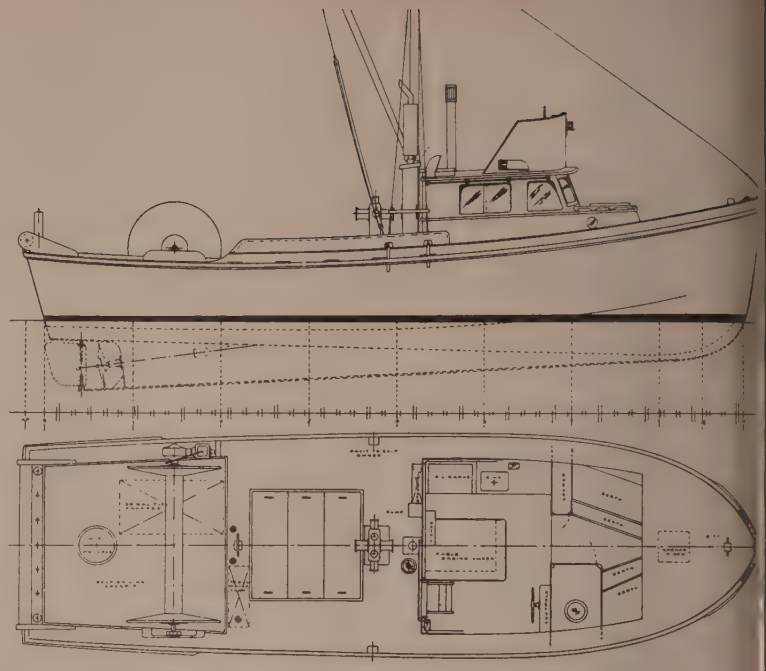
Marine Hardware Co., Berth 73, has equipped Sam Bartello with Barbour's double-knot nylon neting for his **20-Grand;** also the **Flyer,** A. Castagnola; **Gari,** John Falcone; and C. Scalo's **Francisco.** The **Rainbow,** L. C. White of Newport Beach, is using nylon also, it is reported.

Seaside Supply Stores, San Pedro, has recently sold **Bella Marie** and **Conte Bros.** Hemingway & Bartlett Nylock 485 twine. The netting was Adams. On these nets 1¾ knots were used.

Rolf Sannes of the Seaside Supply Stores also reports he has supplied two beach seines to the **Geronimo** which was recently purchased by the Oceanarium Inc., Marineland of the Pacific. Also supplied were brailers, scoops, trap nets, etc. for handling the specimens to be collected for the new aquarium.

* * *

ANTHONY FERRANTE, Monterey, partner in the purse seiner *Ferrante Bros.,* and Miss Antoinette Chiamataro, daughter of Mrs. Antonia Chiamataro, Pittsburg, Calif., were married in the river city recently . . . *CLYDE HICKEY,* Mill Valley, has installed a General Motors 4-51 diesel in his party fishing boat *Clymar.* The engine was sold and installed by Shoreline Diesel Maintenance, Fishermen's Wharf, San Francisco . . .



● Rigged with a reel large enough to carry a drum seine, the 36' vessel sketched here designed by Henry A. Stewart, Port Angeles naval architect, as a combination gillnetter-drum

She **could** be operated by one man gillnettering; and with her seine gear aboard she c operate effectively with four.

This is a craft primarily for the Puget Sound fishery, and particularly that of the Point Ro Boundary Bay-Cherry Point triangle, where the seiners can be small and the gillnetters bi advantage; and a fisherman may switch from one gear to another with the tide and fis advantage.

Hull of this Stewart convertible is similar to that of the **Scamp,** which came from the s board last year, and which was powered with a Cummins diesel.

This is a modified V-bottom with 11½' beam.

Two boats were damaged at Fishermen's Wharf, during a blow last month. They were the trawler *Saturnia,* S. Romani, skipper, and the *Pozzalo,* A. Oswald, owner . . . S dard Oil Co. of California marine vice station at Fishermen's Wh Ed Canepa, manager, has had dock further strengthened, with a tional fender piling for the protec

How to Fish With a "Blanket"—

The "blanket net" is shown here in operation off the California Fish and Game research boat *Yellowfin.* This net has proved successful, according to biologists, as a means of sampling fish attracted to a light, and also as a method of catching bait. It is possible that this type of net might be applied to commercial boats — small boats, where simple, light-weight gear is required and man-power is a factor. Crew on the *Yellowfin* state that the gear requires five minutes only to set and brail.

New Crab House

The Bell Buoy Crab Co., incor ated at Seaside, Ore., the first of year, formally opened its hands new establishment in late Febru after extensive remodeling. The c pany, operated by three Siguro brothers, Henry E., Oswald and C ence, reports receiving 23,000 d crabs last year; the majority being to wholesalers, while 2,500 cases canned; and about $22,000 worth clams were bought from diggers.

The company now owns two boats: the *Bell Buoy,* of which Os is skipper, and the *Active,* capta by another brother, Robert.

Britton Fishes 'Idle Hour'

R. H. Britton, Forest Grove, has signed on as skipper of the Seattle troller *Idle Hour,* with w he planned to start salmon fis the middle of March.

OOD FISH
ARKETING

News and Views of National Trade in Fish and Shellfish

tion of PACIFIC FISHERMAN--

April, 1955

enten Efforts Maintain almon Sales Momentum

ales sic 'em behind salmon this g set something of a new stan- , at least to the extent that it ed several individual outfits with e than usually ambitious mer- dising programs in specialized kets.

hese individual efforts were ed by the National Canned Sal- Week which opened with Lent commanded a lot of coordinated peration, not only within the trade by the transportation, equipment, ply and financial allies of the in- ry.

his broker-sponsored movement whipped-up on pretty short notice n it became evident that the in- ry-wide salmon promotion pro- m was going to fall short of con- ance through the disaffection of of the larger factors.

he brokers and sales agencies de- d that momentum was something should be maintained and so they ted-off National Salmon Week and e it a quick hustle.

he response was remarkable and, h field brokers falling in line on vide front, real progress was reg- red.

Specialized market merchandising ntioned above ran largely at the il level — as in the *Pillar Rock* ter bonnet program mentioned in these pages; but also hit mass advertising in metropolitan centers, as in the case of its new-high in New York City advertising launched for *Bumble Bee* by Columbia River Packers Association. *Bumble Bee* buzzed in the subways with car cards on all lines; as well as on 160 outdoor billboards throughout metropolitan New York, including northern New Jersey, Westchester county and Long Island.

● Fish and Wildlife Service lent a hand in Lent with material plugging the National Canned Salmon Week through its information service, featuring "Salmon Casserole Surprise", which is *PF's* "Recipe-of-the-Month" in this issue.

Speaking of salmon, the Service said:

"For versatility, canned salmon wins the homemaker's vote, whether it's a full-fledged meal for the whole family or a quick snack for hungry youngsters. Protein-rich salmon is an excellent ingredient for many types of dishes. For convenience it can meet any homemaker's requirements."

SEATTLE MARKET

rices openly quoted at presstime, fob. ific terminals, for cases of standard rchandise, 48 tins per case unless other- e indicated. Advertised brands are ted higher on some principal items.

ska Salmon	
d, talls	$ 29.00
d, halves	16
d, halves (f)	15.50
noe, talls	25
ng, talls	25
um, talls (s)	16.50-17
um, halves	9.50
get Sound	
ckeye, halves (mf)	16.50
ckeye, halves (hf)	17-17.50
ab	
ska King, fcy.	31-32
ska King, std.	25-26
ngeness, ½s 24	12

Calif. Packing Corp. Reorganizes Sales Dept.

Irving H. Granicher, vice-president in charge of marketing of the California Packing Corp., announces a reorganization of responsibilities in the sales department, involving a decentralization of responsibility. O. E. Seegelken is now general sales director, with Ross B. Yerby, Jr., formerly division sales manager in New York, transferred to San Francisco as an assistant general sales director.

Stix Advances Hayman

Robert L. Stix, president of the New York City fish and seafood sales company bearing his name, in March announced that Robert W. Hayman, manager of the Robert L. Stix, Inc., frozen fish department, had been elected secretary of the company.

He will continue in charge of frozen fish as well.

Calpak Resumes Tuna Packing and Distribution

Before World War II, California Packing Corporation's *Del Monte* tuna was one of the leading brands of that always popular canned fish. Then early in the war the government urgently needed both the Calpak tuna plant site and its tuna boats, so *Del Monte tuna* soon became a "war-scarce" item.

Now Calpak announces completion of plans to resume the packing and distribution of *Del Monte* tuna. Both white meat Albacore and light meat tuna will be available in both solid pack and chunk style; all styles in the 6½-oz. flat cans.

A special feature of the new *Del Monte* tuna pack will be entirely new label designs planned to make it easier for shoppers to identify quickly each of the four different styles of pack.

Fish Week at Los Angeles

Los Angeles had its first annual FISH WEEK March 13-19.

Southern California Fisheries Association, sponsoring the event, worked through Lee & Associates. The campaign was extensive, including radio and TV personal appearances by such individuals as Norma Young, Tom Brennan, CBS matinee, etc. There was also a schedule of radio and TV "plugs" on shows originating in Los Angeles.

A special recipe was issued through the Southern California Gas and Southern Counties Gas Co. news release service, to appear in 104 newspapers. Other recipes were handled through newspaper syndicates.

Merchandising and publicity tie-ins included those with Hunt Foods, Cubbison's prepared dressing. Home economics tie-ins contributed to the publicity on the use of fish. There was also extensive use of transit company outdoor advertising.

Old Cannery Burned

The old cannery of Strand Fisheries at Aberdeen, Wash., was destroyed by fire Feb. 17. The plant, which has stood for some 50 years, had been inactive in recent years, during which the Strand operations have been conducted at its Hoquiam headquarters.

Tie-In Lenten Tuna Sales Drive With Related Items

Emphasis of the California tuna industry in February, March and the first week of April was on selling tuna for recipes utilizing other basic food products such as olives, macaroni, cheese, rice, milk, etc.

The Lenten campaign followed hard on the promotion of National Tuna Week through the Tuna Research Foundation and the Theodore R. Sills & Co. organization.

National Tuna Week was recognized by more than 15 network and food television shows with a combined viewing audience of approximately 150,000,000 people, according to the Foundation's report. Also, home economists made guest appearances on TV homemaking shows in Chicago, Cleveland, Philadelphia and Columbus.

The week was hailed 17 times by network radio shows with a total audience of approximately 100,000,000 people. In addition, four radio scripts with tuna recipes went to 700 women broadcasters.

Nine national magazines featured tuna in color and black-and-white photographs and recipes ten times in October, November and December: total combined circulation 35,212,765.

Tuna and National Tuna Week were in the limelight on many network shows, such as Mr. Peeper, TV, the Garry Moore show, etc. Showing of the booklet "Tuna, a Saga of the Sea" on various TV shows resulted in thousands of women writing in for the booklet.

Lenten tuna promotion featured a tuna-macaroni bake, a joint campaign between tuna canners, macaroni manufacturers and Pet Milk. The Jones & Laughlin Steel Co., in cooperation with the Can Manufacturers Institute, was said to be taking a four-color page in the Saturday Evening Post for consumer backup in the promotion.

"Tioga Tuna Bake" is a recipe worked-out in connection with the Olive Advisory Board, and the recipe appeared in many national magazines. A Kraft dinner with tuna was featured in full-page color ads in leading newspapers throughout the country.

The Rice Consumer Service featured a tuna-and-rice casserole during National Rice Week, March 13 to 19, and Minute Rice and tuna was highlighted by General Foods in its Lenten material. Another interesting promotion was the Cantonese "Tuna-Rice Ring," in collaboration with Chun King, displaying a 4-color ad appearing March 6.

● Among the Lenten season's effe tive sales gimmicks in the salmon bu ness is the "Pillar Rock Easter Pa ade", dreamed up by L. A. Peterse New England Fish Co. sales manage and featured in a number of nation markets.

Sketch above is from one of t newspaper advertisements which ini ated this campaign. Point-of-Sale p cards and salmon shelf pockets wi entry blanks carried the consum right to the place where she wrapp her hand around a can of Pillar Ro salmon, which in turn was wrapp in the label required to accompa the contest entry.

Early response to the Easter Bon idea was satisfactory and stimulati

Twenty-five hats were offered each market covered, and the adv tisements listed the stores at wh the winners could take their pick hats to a retail value of $17.50 ea

BREAST-O'-CHICKEN TUNA, INC.
28th Street and Harbor Dr. San Diego

ew Group Promoting *arnation* Brand Salmon

n ambitious program for promot- ne sale and consumption of high- canned salmon—primarily Puget d Sockeyes and Pinks, but also ding Cohoes and selected Alaska —has been initiated by Pacific on Associates, Inc., recently or- ed by a group of Puget Sound Alaska canners. Leading part in nizing the program is taken by G. Mitchell, head of the Burk ning Co., Bellingham, who holds such a movement must be backed group of packers in order to continuity of production and

or concentrated effect, the pro- on is being focused on one brand d for this purpose the *Carnation* l has been adopted—being made lable to the new organization by ngement with W. W. Durney, ident of Durney, Inc., Los An- s, who directs the use of the *Carnation* trade mark for fish products under license from the Carnation Company.

To handle the marketing of *Carnation* salmon on a national scale, Pacific Salmon Associates have appointed J. R. Barry & Co. of Terminal Island, Calif., who have just opened an office in Seattle; while the advertising and promotional campaign is being carried on by Erwin, Wasey & Co., well known in this field, who are initiating a strong program of consumer advertising and merchandising aids to dealers. It is of interest that these two firms are also serving as sales and advertising agencies for *Carnation* tuna, put on the market a few months earlier by the California Marine Curing & Packing Co.

Returning late in February from the National Canners' Convention in Chicago, Mr. Mitchell declares he found great interest there in *Carnation* tuna, and that salmon under this brand is finding a warm reception. Orders were being received at that time, and it was expected that shipping would start about April 1.

He feels that the time is very opportune for such a campaign, especially on Sockeyes; that the packers are strategically situated to take full advantage of the steadily increasing runs of this species, which he believes will be available in continuous volume from now on as result of the rehabilitation of the Fraser River runs.

Mr. Mitchell points also to the increased spawning of Pinks above the Hells Gate fishways in the Fraser; encouraging progress of the Washington Fisheries Department toward establishing an even-year run of this species in Puget Sound, and this department's extensive stream improvement work, as foreshadowing an increasingly large and continuous supply of Pinks, Cohoes, etc., from these waters. With confidence, further, that the trend of Alaska production will soon start upward, he feels the need of promotional work now to pave the way for more abundant supplies in the future. As for Sockeyes he says, "We have the finest fish in the world —we might as well let people know about it".

SOUTHERN CALIFORNIA TUNA PRICES*

Tuna (Advertised Brands)

White Meat fcy., 48/7-oz.	$ 16.25
White Meat chk., 48/6½-oz.	14.50-15.00
Light Meat fcy., 48/7-oz.	15.00
Light Meat chk., 48/6½-oz.	13.50
Grated, 48/7-oz.	8.50- 9.00

Tuna (Private Labels)

White Meat fcy., 48/7-oz.	14.00-15.00
White Meat chk., 48/6½-oz.	12.50-13.50
Light Meat fcy., 48/7-oz.	11.60-13.00
Light Meat chk., 48/6½-oz.	10.00-12.00
Grated, 48/6-oz.	8.25- 8.50

*Source: U. S. Fish & Wildlife Service. California prices only, f.o.b. canner's terminal.

'hey Add Up
'o A Lot of Sales!

Oceanic
SALES COMPANY
3302 SMITH TOWER
SEATTLE 4, WASH.

PETERSBURG
Cold Storage Co., Inc.
PETERSBURG, ALASKA
Ralph Hall, Manager
Commercial
FREEZING and STORAGE
Excellent Facilities for Buyers and Fishing Boats
BAIT ICE
Radio Call KWO 28

THERE'S A GROWING Demand for

Quality
Pink Salmon
KELLEY-CLARKE CO.
2460 6th Ave. S.
Seattle 4, Washington

PF's Recipe-of-the-Month—Salmon Casserole Surprise

From the home economists of the U.S. Fish and Wildlife Service comes *PF's* "Recipe-of-the-Month", Salmon Casserole Surprise, which they recommend as a "delectable but economical and easily prepared dish combining salmon, potatoes and cheese".

How do you make it? Thus:

SALMON CASSEROLE SURPRISE

- 1 pound can salmon
- 3 tablespoons butter or other fat
- 3 tablespoons flour
- 2 cups liquid (liquid from canned salmon plus milk to make volume)
- 1 quart cooked potatoes, sliced
- ½ cup mayonnaise or salad dressing
- ½ cup cheddar cheese, grated
- 1 teaspoon prepared mustard
- 1 teaspoon Worcestershire sauce

Drain and flake salmon, saving liquid. Melt butter, and blend in flour. Add liquid gradually, and cook until thick and smooth, stirring constantly. Arrange potatoes, salmon, and sauce in alternate layers in a well-greased casserole. Combine remaining ingredients, and spread over the top of the fish mixture. Bake in a moderate oven, 375° F., for 30 minutes. Serves 6.

Lenten Promotion For Breast-o'-Chicken

Breast-o'-Chicken tuna featured an interesting premium in its hard-hitting merchandising and sales campaign during Lent—a zippered storage bag of heavy plastic for laying away articles of clothing, etc. Two labels plus 50c secures the bag for the housewife.

Dealers aids, supplied free, included complete display sets wrapped individually with the storage bag, ad-pads and newspaper mats in various sizes.

Fishermen's
Packing Corporation
ANACORTES, WASH.
Canners of
PUGET SOUND SALMON
Our BRANDS
SOCKEYE
"Snow Cap"—"Snowland"
COHOE
"Olympic"—"Ocean Spray"
"Green Breaker"
PINK
"Waterfall"—"Ocean Blue"
CHUM
"Golden West"—"Golden Glow"
Cannery: ANACORTES, WASH.

Hitting on All "6"
"6" Aggressive Salesmen
Building Canned & Frozen Seafood
Brands in CHICAGO & MIDWEST.
Sales efforts second to none
for aggressive producers.
L. H. FROHMAN & SONS • Sales Age
FOR CANNERS AND PACKERS OF FOODS
510 N. DEARBORN STREET
CHICAGO

VITA FOOD
TRADE MARK
PRODUCTS, INC.
GENERAL OFFICES — NEW YORK CITY
Importers & Exporters — Producers, Packers, Smokers
FISH OF ALL KINDS
Mildcured Frozen fro Principal ters of Ala
SEATTLE OFFICE — 1844 WESTLAKE NORTH

Food for Thought

TODAY, canned salmon is one of the most economical and appetizing foods we eat. Homemakers have many tasty recipes which make a main salmon dish for as little as 15c a serving.

This does not mean that salmon appeals only to budget-conscious persons. Salmon is also the epicure's choice . . . one of the most delicious and delectable seafoods there is.

However, the Industry today is faced with a continuing problem . . . **there are many other competitive economical foods.** Salmon with its high content of essential food values, its deliciousness, its attractiveness, will continue as a prime favorite, but only **if we keep it within price reach.** It is therefore up to all of us in the fishing industry to **cut costs wherever possible.**

Pacific American Fisheries, Inc. pledges it full cooperation to this end.

PACIFIC AMERICAN FISHERIES, Inc.

SOUTH BELLINGHAM, WASHINGTON

Quality Always

Sales Subsidiary: DEMING & GOULD COMPANY, South Bellingham

FREE! Complete Facts on metal conveyor belts!

In many operations only *metal* conveyor belts are practical, e.g.—where there are temperature extremes or other severe conditions, and where free circulation of liquids or air is required. Here—in this free book—is the complete, up-to-date story on metal processing belts by Cyclone—the largest line of metal belts made. Cyclone makes processing belts of various types and sizes—in carbon, alloy and stainless steels.

Catalog #5 contains information, specifications and photographs on most of them. Also included are suggestions on the proper care of Cyclone Belts, and interesting facts on belt accessories. Send the coupon for your copy.

CYCLONE FENCE DEPARTMENT
AMERICAN STEEL & WIRE DIVISION, UNITED STATES STEEL CORPORATION
954 60th St., Oakland 8, California
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

MAIL THIS COUPON TODAY

Cyclone Fence, Dept. R-45, 954 60th St.
Oakland 8, California

Please send me your big, illustrated Catalog #5. No charge or obligation.

Name.....

Company.....

Address.....

City.....State.....

USS

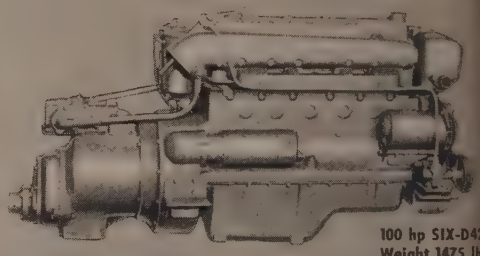
UNITED STATES STEEL

MORE WORKING HORSEPOWER ... NO DEADWEIGHT!

GRAYMARINE DIESELS

30 *hp* 50 *hp* 100 *hp* 135 *hp*

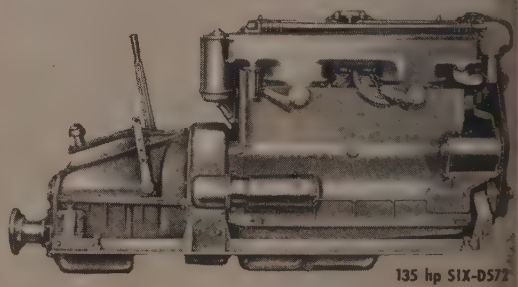
THESE ARE CONTINUOUS DUTY RATINGS



100 hp SIX-D427
Weight 1475 lbs.

Workboat owners will be particularly interested in Gray's four-cycle Diesel SIX-D427, rated 100 hp at 2200 rpm and weighing only 1475 lbs.

Originally developed for and extensively used by the U. S. Navy, this fine Graymarine Diesel reflects the know-how achieved in Gray's sixteen years' experience in manufacturing Diesel marine engines.



135 hp SIX-D572

The streamlined SIX-D572 is similar in design and general appearance to the lightweight 100 hp Graymarine Diesel, and is rated 135 hp at 2200 rpm. Small Gray models include two 4-cylinder Diesels of 30 and 50 horsepower.

DIESEL ENGINES

Four cycle. Horsepower figures are continuous service ratings. Weights include reduction gear.

	HP	RPM	Piston Displ.	Weight (Lbs.)	Length (Inches)
Four-D157	30	1800	157	1100	50
Four-D260	50	1800	260	1400	55
Six-D427	100	2200	427	1475	67
Six-D572	135	2200	572	2510	72

GRAY ALSO BUILDS GASOLINE MODELS—16 to 200 hp

GRAYMARINE

710 CANTON AVENUE · DETROIT 7, MICHIGAN

SUBSIDIARY OF CONTINENTAL MOTORS CORPORATION

but Market Offers en Bargain Prices

d-Lent saw frozen halibut prices ng the bottom close as a halibut the habit of doing at sea. As ter of fact, you could buy frozen ıt laid-down in New York City arch at from 22c for chickens c for prime mediums.

st July, even on days of heavy ngs, the price on the Seattle mar- vas running 20¢ for chix to 24c ediums.

u can't pay 24c for a medium ut in July, handle him over your head him and freeze him, glaze and store him for seven months, him by rail across the continent, him in New York in March for o 26c and have a profit to show our trouble.

e New York market weakness fest in halibut wasn't shared by ntire frozen fish list. It was criti- n halibut as result of a big pack, perhaps because this kind of fish under the competition of fish s.

her varieties fared much better. March 1 frozen sablefish was ed at 24-25c in New York, at a equal to halibut.

lver salmon commanded 42c to and even Chum salmon was sell- at 28c to 30c, well above halibut.

Fillet Imports Outstrip U. S. Output

● Fillet imports to the United States out-ran domestic production in 1954 for the first time in the history of this country's fishing industry.

Foreign fillets entering the United States in 1954 totalled 135.7 million pounds, against 126 million pounds of fillets produced from the catch of American fishermen.

This is indicated by the preliminary official import and output figures.

Not only that; but the January, 1955, imports of 13 million pounds started this year off at a faster pace than did 1954, when January fillet imports were 11.9 million pounds.

California Canned Tuna Pack—January, 1955

(In cases of 48 cans, except as indicated)

White Meat	Solid Pack	Standard Pack	Chunks	Grated, Flakes	Dark & Light	Tonno	*Misc.	Total
½ lb.	57,934	...	29,245	21,975	32			
¼ lb.	8,842	...	...	...	...	...	...	
½ lb.							3,299	
Total								**116,906**
Light Meat								
4-lb. 12s	106	...	522	...	221			
1-lb.	247	...	1,861	...	106	...	...	
½ lb.	51,794	5,444	236,162	64,975	349	10,326		
¼ lb.	5,067	...	25,951	...		†9,869		
½ lb.							13,831	
Total								**414,387**
Bonito								
½ lb.	...	272	...	754			...	1,026
Total	...	...	...					
Yellowtail								
½ lb.	...	...	...	1,765			...	1,756
Total	...	...	...	...	...	...	...	
Totals	**123,990**	**5,714**	**297,741**	**89,469**	**708**	**20,195**	**17,130**	**‡534,075**

*Tuna specialty products, converted to ½ lbs.

fresh frozen

SALMON

AND

HALIBUT

STEAKS

FILLETS

and now . . .

SALMON
HALIBUT
and FISH

STIX

fresh frozen — breaded — ready to cook

SAN JUAN

SAN JUAN FISHING & PACKING CO.
FOOT OF STACY STREET — SEATTLE

MUSTAD
Key Brand FISH HOOKS

Like old friends they wear well and can be depended upon at all times. Ask your fishing supplies dealer. Mustad Fish Hooks are made in Norway by

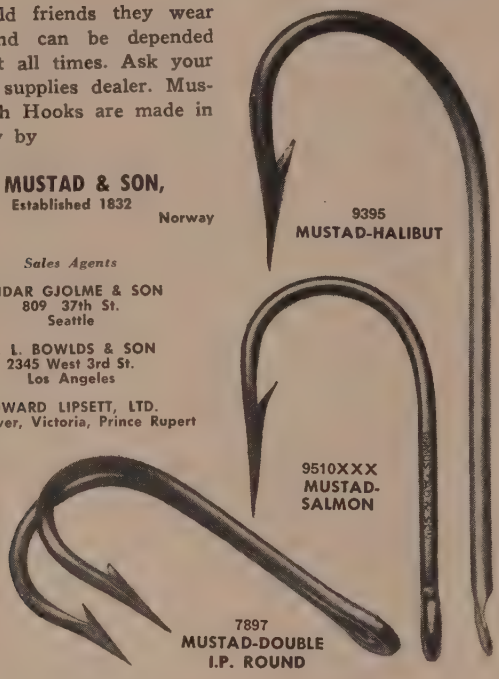
O. MUSTAD & SON,
Established 1832
Oslo, Norway

Sales Agents

REIDAR GJOLME & SON
809 37th St.
Seattle

H. L. BOWLDS & SON
2345 West 3rd St.
Los Angeles

EDWARD LIPSETT, LTD.
Vancouver, Victoria, Prince Rupert



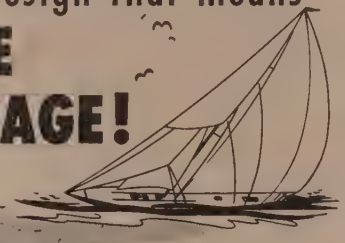
It's easy to find out when it's foggy offshore

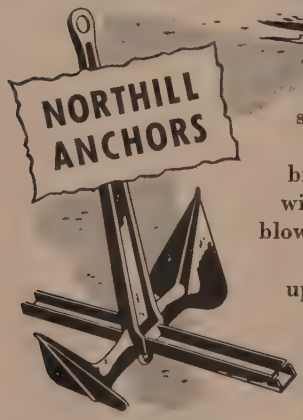
...when you use ship telephone service. For twice a day, your Marine Operator transmits the latest weather reports free of charge. Storm warnings are sent out as soon as they are received. If you miss a report, just call in for it. The charge for a "repeat" is small.

For more facts on ship-to-shore telephone service, contact Pacific Telephone in your nearest large port city and ask for our free booklet, Ship Telephone Service.

Pacific Telephone

Scientific Design that means SAFE ANCHORAGE!





Here's an anchor that's so light it takes the work out of anchoring and breaking out. Yet it holds with a bulldog grip in any blow. It has been the largest selling anchor for boats up to 80 feet for 17 years! 3 to 105 lbs.

Skin-Divers! See the new precision-built Northill Air-Lung!

Northill Company, Inc.
9851 So. Sepulveda Blvd., Los Angeles 45, California

A subsidiary of THE GARRETT CORPORATION

The PAK-FORMER

Leading tuna canners are now using the PAK-FORMER for their Chunk and Grated Style Packs. A variable speed drive permits filling speed adjustments of between 50 and 250 cans per minute. Available to the industry under similar terms as our PAK-SHAPER.

For Complete Information Write to

E. H. CARRUTHERS CO.
Engineers and Designers to the Food Packing Industry
P. O. Box 1332 Warrenton, Ore.

Stolk, who succeeds C. W. Roberts as president of the American Can. Co in charge of the company's Pacific Division.

anco Advances R. C. Stolk and Alexander Black

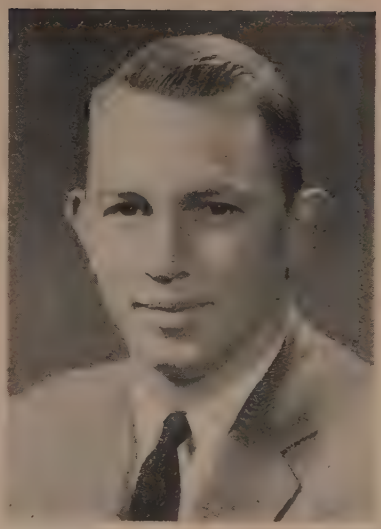
election of R. E. Stolk of San Fran- to the position of vice-president harge of the company's Pacific Di- n this spring was followed by ad- ement of Alexander Black to the position of manager of sales, which Mr. Stolk has occupied for some time.

Mr. Stolk succeeds C. W. Roberts, who is retiring after 43 years of service, during which he rose from factory hand in Los Angeles to head of the division.

The new Pacific division executive, who will have administrative jurisdiction of Canco's sales and production in California, Arizona, Nevada, Oregon, Washington and Alaska, is a native of Cranford, N. J., and like Mr. Roberts, began his career with Canco as a manual worker at the former Jersey City, N. J., factory at the age of 17.

At 21, Mr. Stolk became foreman of the collar can department in the Hudson factory, also in Jersey City, and from there he was transferred to the sales department of the main Canco office in New York City, where he served for 2½ years before being assigned to the Pacific division in San Francisco as clerk of the order department.

Following nearly 2½ years service with the U. S. Navy, Mr. Stolk in 1947 became assistant manager of sales in the Los Angeles district, and was promoted to manager in 1949. A year and a half later, he was transferred to



Alexander Black, advanced to manager of sales for the Pacific Division of the American Can Co.

San Francisco as sales division manager in charge of containers for meat, fish and dairy products, and in 1951 became assistant manager of sales for the Pacific division. He has been division manager of sales since Jan. 1, 1953.

Mr. Stolk was also elected a di-

E REAL PROFIT IS IN THE

Product Yield!

STANDARD LOW TEMPERATURE FISH MEAL DRYERS

!% TO 5% PROTEIN GAIN – 2½% MEAL GAIN

HIGH PROTEIN MEAL. Actual laboratory tests prove that STANDARD low temperature drying produces up to 2½% more meal with at least 2% more protein than high temperature drying.

OIL, LOW IN FREE FATTY ACID. A STANDARD plant assures you peak delivery of top quality, low moisture, low acid oil.

ELIMINATES SCORCHING AND BURNT ODORS. Low temperature does not degrade or burn protein. Eliminates expensive vapor incinerators.

starts with quick closing doors | Conveyor type packing tables | Air conveying and sacking equipment | Cookers and presses | COMPLETE FISH PROCESSING EQUIPMENT

WRITE FOR COMPLETELY ILLUSTRATED FISH PROCESSING BULLETIN TODAY!

STANDARD STEEL CORPORATION

5013 Boyle Ave., Los Angeles 58, Calif ● 15 Park Row, New York 13, N. Y.

STANDARD 52 YEARS STEEL CORPORATION

F-6

rector of the Canco subsidiary, American Can Company of Hawaii.

Mr. Black moves up from the position of assistant manager of sales. As division manager, he will take charge of Canco sales activities in California, Oregon, Washington, Nevada, Arizona and Alaska. He will make his headquarters at the Division offices in San Francisco.

He joined the American Can torpedo-manufacturing subsidiary, Amertorp, at St. Louis, Mo., in 1942. Beginning in 1943, he was on military leave as a Navy lieutenant. After the war, he rejoined Canco in New York as a sales assistant.

In 1947, Mr. Black was transferred to the Pacific Division sales department, in San Francisco, and then to the Southern California district sales in Los Angeles. In 1950 he became Southern California district sales manager, a position he held until 1954 when he was promoted to Division manager of commodity sales and then to assistant manager of sales.

Peterson Back at Sitka Cold Storage as Manager

Len T. Peterson, lately superintendent of the Aleutian Cold Storage at Sand Point in the Shumagin Island, is back at Sitka—this time as manager of the Sitka Cold Storage Co., which he was chief engineer whe left there in 1931. He succeeds Rutherford, resigned. Mr. Peters a member of the company's boar directors.

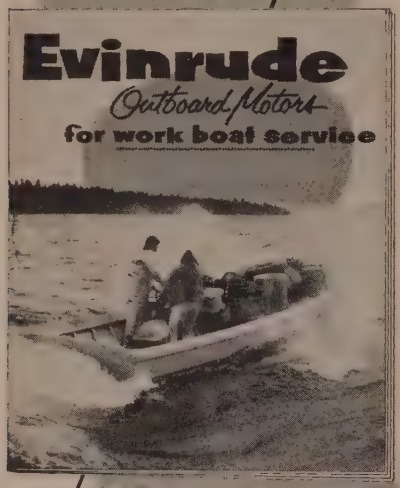
At the annual meeting of Sitka Storage in December, F. Bartow Jr., was elected president, succe August Buschmann, who continu a director.

Mr. Peterson, before going from Seattle the end of February, PACIFIC FISHERMAN the company to discontinue its recent practic buying and merchandising fish o own account, and return to its fo policy of freezing, mild curing, etc a custom basis only—but will cont the sale of bait, ice and general fi men's supplies.

Japanese Albacore Canning Suspended

Japan Tuna Canners Associa early in February decided to sus canning of winter Albacore. This tion was based on an estimated c over of about 800,000 cases hel exporters and the Tokyo Canned Sales Co. which, with the dull A ican market, was causing serious tress. It was also decided that brine-packed tuna should hereafte exported except to the U. S. ma

new book



gives you the facts on

modern
OUTBOARD POWER
for *fishing*
service

TODAY there's a *new kind* of outboard power for work boat duty! A complete line of new Evinrude *Aquasonic* models so advanced in capability, stamina, and smooth, quiet operation that they set entirely new standards of performance. Get the facts! Send coupon for booklet.

EVINRUDE MOTORS
Division of Outboard, Marine & Mfg. Co.
4575 N. 27th Street, Milwaukee 16, Wisconsin

Send me booklet on outboard power for work boat duty.

Name.....

Address.....

City.....Zone...State.....

(In Canada: Mfd. by Evinrude Motors of Canada, Peterborough)

So much depends on the oil!

● The delicate flavor... the tempting freshness of your finest canned fish can be entrusted to Archer "S" because this clear, bland soybean oil has had every trace of odor removed by a special refining process. Also, you get the same high quality oil *every time you order*. Archer "S" *can't* vary. It's refined not in batches, but as an endless "ribbon" of oil. By streamlining refining, we are able to *streamline the cost* of Archer "S" too. Ask us for samples and prices.

Improve the Flavor... pack with

Archer "S"
America's Finest Soybean Salad Oil

Archer-Daniels-Midland company
700 Investors Bldg., Minneapolis, Minn.

LINES and LEADERS

ll Anchor
s Many Advantages

K. Northrop, aircraft designer and r, is also the designer of the North- y light small boat anchor which, it ed, has far greater holding power eavier anchors of other types. Northrop firmly believed that sea- people had the mistaken idea that ivier the anchor, the more holding it would have. He worked on the that the design of the fluke (or area, plus instant penetration, were re important than weight alone. ade a light anchor with strong, wide and a stock running at right angles re instant penetration, and this an- now known as Northill, manufac- for over 17 years by the Northill subsidiary of the Garrett Corp., Los s.

Northill is a cast anchor made of ial high-tensile alloy steel, heat t. It is galvanized by the hot-dip s, giving a heavy zinc coating in- hat a Northill will withstand rough Northill anchors run from the light- "giant," which runs less than 3 s, up to the 105-lb. size for boats 80 feet in length.

A Northill Anchor hits the bottom ready to dig in. Fluke, shank and one stock arm point all contact the bottom simultaneously.

vater Manager Dies

old James Wilson, manager of the n marine department of Tide Water ated Oil Co., died at his home in ley, Calif., Feb. 14.

ing Tide Water Associated in 1919, Wilson later served as superintendent e protection and safety for the com- western division, and had been ger of its western marine department 1944.

Lister Diesels Described

Lister marine diesel engines with one to six cylinders and 9 to 5¾ bhp. at 1800 rpm are presented in a 4-page illustrated Bulletin No. 448 by The National Supply Co., Pittsburgh. Design features, accessories, performance curves, and dimensional diagrams are included.

Compact Starting Motor By Ingersoll-Rand

Ingersoll-Rand announces a new, smaller air starting motor, known as Size 5 BM, designed for service on gas engines of 750 to 1750 cu. in. displacement, and diesels from 300 to 700 cu. in. Other sizes in this line are the 9 BM and the 20 BM.

In the new motor the Ingersoll-Rand multi-vane air motor is direct-connected by a splined shaft to the Bendix drive, eliminating gears. Bearings are sealed to keep grease in and dirt out. Advantages claimed are compactness as compared with electric starters; elimination of need of generators and batteries with their maintenance and replacement costs; and freedom from the effects of climatic conditions.

Three Marine Specialists Join C. J. Hendry

To keep customers advised of the many new developments and products in the marine industry, C. J. Hendry recently added to its sales and service staff three men of unusually fine background in their respective fields.

Joseph J. Granville, formerly assistant operating manager and purchasing agent for Hillcone Steamship Co., has joined the heavy marine and industrial sales department. Arthur M. Clay, added to the small-boat hardware and sales department, has a long background; while James F. Pressley, who went from design and production work to manufacturing in the field of plastics and fiberglass, is now head of this rapidly-growing Hendry department.

Frank Blankenship, for 30 years a warehouseman for the Pacific Marine Supply Co., Seattle, died in that city March 3, aged 58.

DISTRIBUTORS OF NATIONALLY ADVERTISED ELECTRONIC AND MECHANICAL SPECIALTIES

IOMARINE — BENDIX ELECTRONIC EQUIPMENT
AUS STOVES — SEN-DURE HEAT EXCHANGERS
E BATTERIES — HONEYWELL SEA SCANAR
MPIC RANGES — KIDDE CO-2 FIRE SYSTEMS
GAS SNIFFERS — MATHERS CONTROLS
RY CONTROLS — GODFREY COLLARS

TE 4-4538

AUL W. HILLER

315 AVALON BLVD. WILMINGTON, CALIFORNIA

"THE CAPITOL"
HYC
Hydraulic
Reverse and Reduction Gear

FULL FORWARD TO FULL REVERSE . . . IN JUST 3 SECONDS!

Provides fingertip maneuverability for pleasure craft, fishing boats, harbor craft or work boats with engines up to 300 H.P. at 2200 RPM. Available with reduction gear ratios 1½:1; 2:1; 2½:1; 3:1; 3½:1; 4:1 and 4½:1.

Also available as a direct drive reverse gear.

Auto Engine Works, Inc.
325 N. Hamline
St. Paul 4, Minn.

Write for new catalog and specify ratio desired

SALT

That Has Stood the Test for Over 45 Years

All Grades :: High Quality :: Fair Prices

Long Beach Salt Co.
2476 Hunter Street, Los Angeles 21, Calif.
PROMPT SERVICE BY TRUCK OR RAIL
PHONE: TUcker 1424

STAY-TITE MARINE PRODUCTS

Keep Boats at Peak Performance

In addition to those shown at right, Stay-Tite also makes –
- STAY-TITE WOOD CRACK FILLER
- STAY-TITE CANVAS TIGHTENER & FILLER
- STAY-TITE BILGE SOLVENT
- RUSTGO RUST REMOVER

On Sale at your Marine Supply Dealer

STAY-TITE CAULKING COMPOUND
Black, white, mahogany, gray – Waterproof.

STAY-TITE DECK SEAM SEALER
White, black, mahogany. Rubber base. Waterproof

STAY-TITE XXX CEMENT
Natural rubber cement. Slow-drying. Waterproof.

STAY-TITE LIQUID GLUE
Quick-drying. Clear. Waterproof.

STAY-TITE PRODUCTS CO., 9400 Steinway, Cleveland 4, Ohio

New Radiomarine Small Boat Radar

- Saves Money
- Saves Space
- Saves Power

MODEL CR-105

Especially designed for vessels on which space and power are limited, Radiomarine's new CR-105 Radar offers you the EXTRA features that give you MAXIMUM PERFORMANCE—MAXIMUM CONVENIENCE—MINIMUM MAINTENANCE. Only two basic units—indicator and antenna. Indicator is in deck mounted binnacle... keeps picture tube high for best viewing . . . requires less than two square feet of deck space. Antenna is lightweight . . . only 105 pounds. Instant selection of 1-4-16 mile ranges helps you navigate through foul weather and traffic hazards to cut your trip-time, boost your profits. You'll read the clear, bright pictures on its 10-inch scope easier . . . service it quicker with the easy-access chassis. And here's another saving . . . the Radiomarine CR-105 requires only 600 watts from ship's battery or other D.C. power supply. Find out more about the new Radiomarine CR-105 . . . it can mean greater profits for you right now.

RCA

Also available in 1-2-4-12-32 mile ranges.

write for free information now!

RADIOMARINE CORPORATION of AMERICA

A SERVICE OF RADIO CORPORATION OF AMERICA

75 VARICK STREET, NEW YORK 13, N.Y.

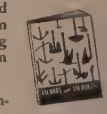
Another 'round the world voyager says:

"WE LEARNED TO RELY ABSOLUTELY ON OUR DANFORTH"*

Mr. Van de Wiele and the ketch "OMOO" received the Blue Water Award of the Cruising Club of America for their 'round the world voyage.

L. G. Van de Wiele, skipper of the 46-foot "OMOO" on her two year 'round the world voyage, writes: "We carried one 100-lb. kedge and two 30-lb. Danforths. In Ria de Camerinas, we rode out a 60-mile gale for a week in a not very well protected spot with one Danforth, but we never dragged one foot . . . we learned to rely absolutely on the Danforth, and acquired a real affection for it . . . we would never dream of using any other type. Thanks for having made an anchor that saved the "OMOO" from disaster at least three times."

Thanks to Mr. Van de Wiele, too, for his unsolicited letter. Boat, ship, and workboat owners throughout the world, find the Danforth the *Holdingest and Handiest anchor ever designed.*



FREE! Sixteen booklet "Anchors a choring," a handbo should be on every Just write "Danfor chors" for your co

* DANFORTH is the registered trade mark of Danforth Anchors

DANFORTH® ANCH

2153 Allston Way Berkeley 4,

Authorized Dealer

RCA RADIOMARINE

Radiotelephones • Direction Finders

RADIOMARINE

DIRECTION FINDERS • RADIOTELEPHONES

Shepherd Radio Shops are skillfully manned and equipped to service your radio equipment. Complete spare parts available.

only at

Los Angeles AN 1-0261

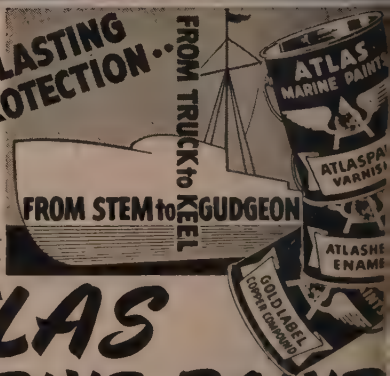
San Diego FR 9-9471

SHEPHERD MARINE

FOR LONGER-LASTING PROTECTION...

FROM TRUCK to KEEL

FROM STEM to GUDGEON



Ask at ship yards or

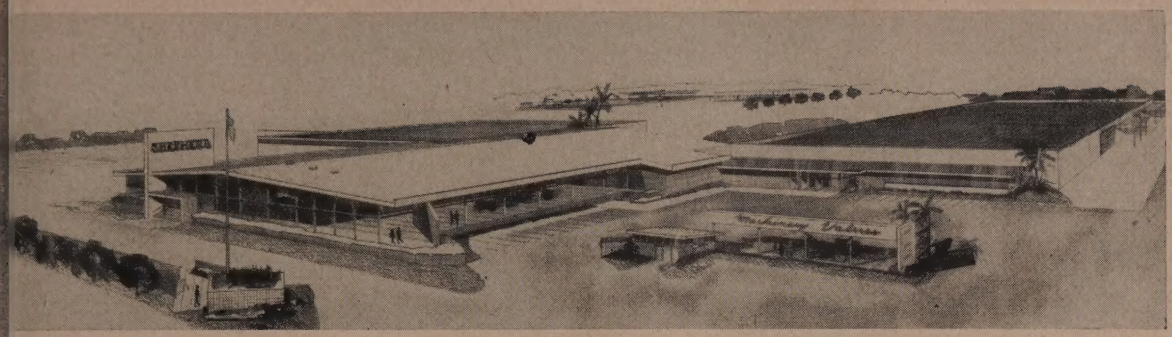
ATLAS PAINT & VARNISH CO.

1922 East Gage Ave.

Los Angeles 1

(Phone KImball 6214)

ATLAS MARINE PAINTS



plant of Shepherd Marine, Universal and Caterpillar Diesel engine distributors, near Whittier, Calif.

pherd Marine Building v Plant Near Whittier

epherd Marine—distributor for Cater- r diesel engines, Universal marine rs and Champion outboard motors— arting construction of expansive new ities, to be its future headquarters, 25-acre site in the East Los Angeles near Whittier, Calif. Plans include displays, parts and service facilities enclosed areas totaling over 110,000 t.

e new Shepherd plant is to be modern esign with large areas provided for ing. The Shepherd Marine headquar- will provide expanded display, parts and service facilities for both diesel gasoline engines and accessories for mercial and pleasure craft. Shepherd ine has served the marine trade in hern California for 30 years, and has rfront branches at San Pedro and Diego. Its present headquarters are tlantic and Bandini boulevards in Los eles.

Marsh & Company Distribute Golden Dipt in Oregon

Phil G. Brady, sales manager, Golden Dipt Division, Meletio Seafood Company, St. Louis, Mo., has announced the appointment of Marsh & Company, Inc., 1238 N. W. Glisan, Portland, as the Oregon distributor for Golden Dipt Ready-Mixed Breading Mix and Golden Dipt Batter-Mix.

Mr. Brady made one of his periodic visits to the Pacific Coast in January, calling on breaders of fish sticks, fillets and other fishery products in company with Gorman Heimueller, Venice, Calif., the firm's west coast sales representative.

Fibreboard Men Advanced

T. N. Bland, President of Fibreboard Products Inc., announces today that B. R. Colkett has been appointed a vice-president of the company. Mr. Colkett has held the position of secretary and treasurer for several years.

J. S. Mitchell, formerly assistant secretary of the company, has been appointed secretary and treasurer.

More Than 300 Boats Fish Out Of Eureka

More than 300 fishing craft engaged in fishing operations out of the port of Eureka at one time or another during the last year, a recent survey disclosed.

The list included more than 100 Eureka-based boats, the majority of which worked more or less regularly out of Humboldt Bay. The remainder included craft from various other Pacific coast points, as far south as Morro Bay and northward to Seattle.

KOHLENBERGER ENGINEERING CORPORATION
DEPENDABLE REFRIGERATION SINCE 1922
FULLERTON - CALIFORNIA

DEPENDABLE REFRIGERATION

SERVING PACIFIC FISHING FLEETS SINCE 1922

Our engineering staff is always at your service. Phone or write for name of nearest boat yard to serve you.

Foreign Inquiries Solicited

General Offices and Factory
FULLERTON, CALIFORNIA

Telephones
L.A. Mutual 6497 Lambert 5-3521
San Diego Sales, Parts & Service—Atwell Supply Co.
201 - 13th St. BE 9-2129

PAUL W. HILLER
315 AVALON BLVD. WILMINGTON, CALIFORNIA
MARINE MECHANICAL EQUIPMENT
TEL: TERMINAL 44-538
Tel: TErminal 4-4538

NORTHERN PRODUCTS CORPORATION
Distributors
American and Canadian
MILD CURED and FROZEN SALMON
705 TERMINAL SALES BLDG.
SEATTLE 1 U.S.A.

H. C. HANSON
Naval Architect :: Engineer
Phone ELiot 3549
102 Colman Ferry Terminal
Seattle 4

PHILIP F. SPAULDING
Naval Architect And Marine Engineer
65 Marion Street MAin 4954
SEATTLE 4, WASHINGTON

San Diego Marine Const. Co.
SHIP CONSTRUCTION and REPAIRS
Marine Railways, Floating Drydock
Foot of Sampson Street
SAN DIEGO 12, CALIF

CAMPBELL MACHINE, INC.
SAN DIEGO 12, CALIFORNIA
BOATBUILDING & REPAIR MACHINERY REP'S
ANCHOR and CARGO WINCHES
Distributors
"UNION" DIESEL ENGINES

J. J. CAMILLO
Wholesale SEA FOOD Broker
935 W. Harbor Drive, San Diego 1, Calif.
Maritime Agency
BROKER and AGENT
Phone Franklin 5189

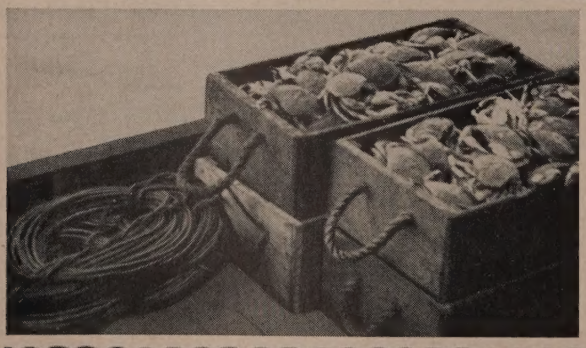
ARTHUR DE FEVER
Naval Architect & Marine Surveyor
Consultation Re-Conditioning Survey
Ship Design Inspection Appraisers
701 East Harbor Drive, P.O. Box 1049
San Diego 12, California
Phone No.: F-9-2159

ADVERTISING INDEX

Albina Engine & Mche. Wks. 29
Allis-Chalmers Mfg. Co., Buda Co. Div. 9
American Can Co. 2
American Marine Paint Co. 52
Archer-Daniels-Midland Co. 74
Atlas Paint & Varnish Co. 76
Auto Engine Works 75
Breast-o'-Chicken Tuna, Inc. 66
Brownell & Co., Inc. 27
Bryant's Marina 54
Buda Co. Div., Allis Chalmers Mfg. Co. 9
Camillo, J. J. 77
Campbell Machine, Inc. 77
Carruthers Co., E. H. 72
Carter Co., T. V. 54
Caterpillar Tractor Co. 7
Chrysler Corp., Marine Engines 28
Classified Advertising 54
Colorado Fuel & Iron Corp., Wickwire Spencer Steel Div. 16
Columbia-Geneva Div., U. S. Steel Corp. 10
Columbia River Packers Assn., Inc. 66
Columbian Bronze Corp. 45
Consolidated Net & Twine Co. 27, 53
Continental Can Co. 8
Cummins Engine Co., Inc. Inside front cover
Cyclone Fence Div., U. S. Steel Corp. 70
D'Acquisto & Sons, A. 54
Danforth Anchors 76
DeFever, Arthur 77
Delca Fish Preservators, Inc. 66
Deming & Gould Co. 69
Detroit Diesel Div., General Motors Corp. 38
Doughnut Corp. of America, Downey Flake Breader Mix Div. 58
Edo Corp. 36
Electric Storage Battery Co. Inside back cover
Enterprise Engine & Mchny. Co. 44
Enterprise Mfg. Co. 51
Evinrude Division 74
Fairbanks, Morse & Co. 5
Federal Propellers 58
Fishermen's Packing Corp. 68
Fitler Co., Ewin H. 49
Forster Shipbldg. Co. 54
Freeman, Doc 54
Freeman, Wood 55
Frohman & Sons, L. H. 66
Garrett Corp., Northill Co., Inc. 72
General Motors Corp., Detroit Diesel Div. 38
Golden Dipt Div., Meletio Seafood Co. 11
Goodrich Sponge Products Div., B. F. 4
Gray Marine Motor Co. 70
Hall-Young Co. 54
Hanson, H. C. 77
Harbor Boatbldg. Co. 55
Harnischfeger Corp. 35
Hart & Burns, Inc. 47
Hatch & Kirk 55
Heminway & Bartlett Mfg. Co. 46
Hiller, Paul W. 75, 77
International Paint Co. 48
Kelley-Clarke Co. 67
Kettenburg Boat Works 29
Keystone Batteries 52
Kohlenberger Engineering Corp. 77
Larson Boat Shop, Al 54
Lear, Inc. (Lear Cal) 63
Long Beach Salt Co. 75
Marathon Corp. 23
Marine Const. Design Co. 53
McKinney Co., H. G. 54, 55
Meletio Seafood Co., Golden Dipt Div. 11
Mercury Marine Electric Co., Inc. 54
Metal Marine Pilot 55
Modern Maid Food Products, Inc. 61
Moffitt, Inc., Lucian Q. 20
Murphy Diesel Co. 50
Mustad & Son, O. 72
National Steel & Shipbldg. Corp. 18
National Supply Co. 59
N. C. Marine 55
New England Fish Co. 68
Nordberg Mfg. Co. 56
Nordby Supply Co. 53
Northern Products Corp. 77
Northill Co., Inc., Garrett Corp. 72
Oceanic Sales Co. 67
Oxenberg Bros. Inc. 66
Pacific American Fisheries 69
Pacific Marine Supply Co. 12
Pacific Tel & Tel Co. 72
Pacific Towboat & Salvage Co. 54
Pauls Div., Linen Thread Co. 3
Petersburg Cold Storage Co., Inc.
Pettit Paint Co., Inc. 40
Plymouth Cordage Co.
Radiomarine Corp.
Red Wing Motor & Mfg. Co.
Rudd & Cummings
San Diego Marine Constr. Co.
San Juan Fish. & Pack. Co.
Seaside Supply Stores
Shepherd Marine
Shore Line Diesel Maintenance
Snow-Nabstedt Gear Corp.
Spaulding, Philip F.
Sperry Gyroscope Co.
Standard Oil Co.
Standard Steel Corp.
Star Net Co., A. M.
Stay-Tite Products Co.
Stix, Inc., Robert L.
Sudbury Laboratory
Tacoma Boat Bldg. Co.
Tower Co., A. J.
Tubbs Cordage Co.
Union Oil Co.
U. S. Rubber Co., Industrial Clothing
U. S. Steel Corp., Cyclone Fence Div. Columbia-Geneva Div.
Universal Motor Co.
Vita Food Products, Inc.
Washington Iron Works
Western Waxed Paper Outside back co
White & Sons, Inc., Wilfrid O.
Wickwire Spencer Steel Div., CF&I
Woolsey Paint & Color Co.

preferred by Western fishermen since 1856

TUBBS FISHING ROPE



Made in the West, Tubbs Extra Superior Manila has been a favorite with Pacific Coast and Alaska fisher

Careful blending of first grade Manila fibers plus sp lubrication and treatment for water repellency Extra Superior Manila unsurpassed for toughness, stre and easy handling flexibility. And you'll find, too, Tubbs costs less to use because it stays stronger, longer.

Whatever your fishing requirements, there is a Tubbs rope engineered to do the job right. For pot warp, purse lines or general deck use, choose Tubbs — a trusted name in rope since 1856.

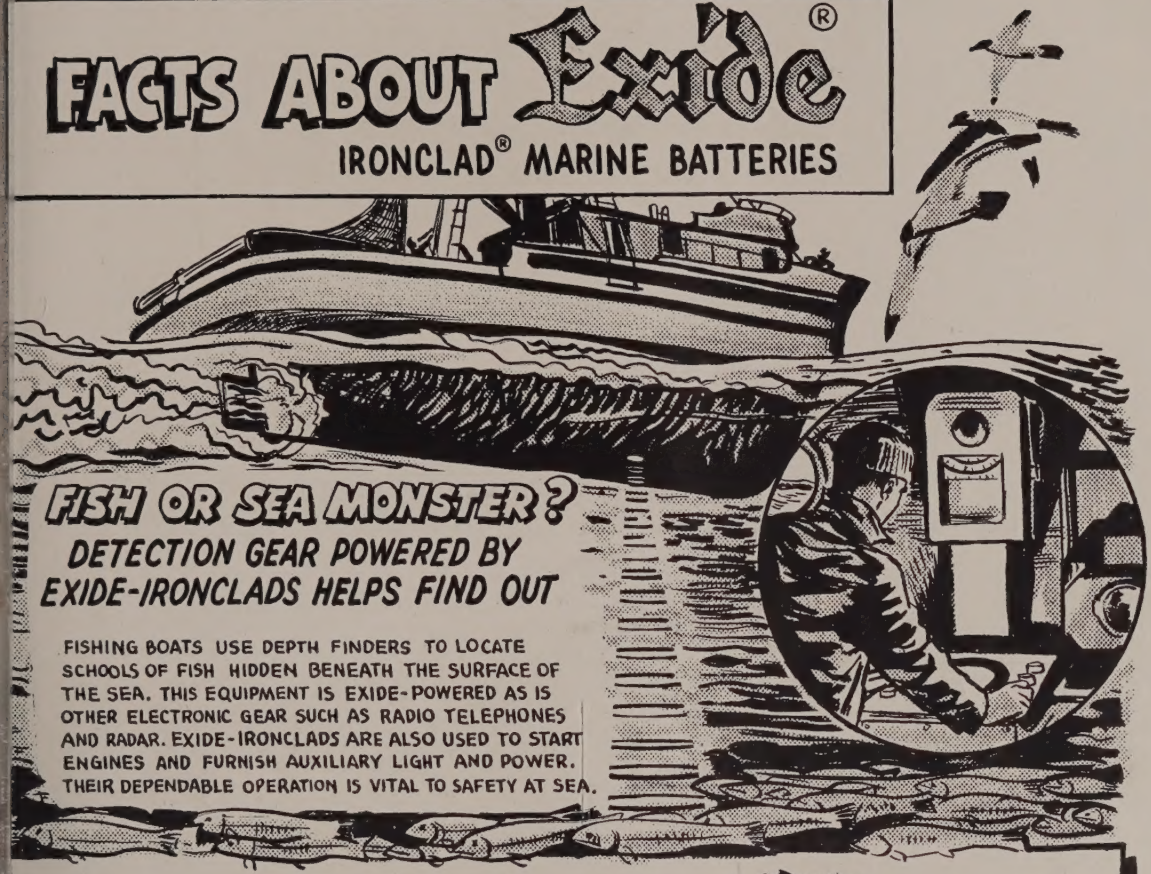
TUBBS SUPERCORE CORDAGE COMPANY

TUBBS CORDAGE COMPANY

SAN FRANCI SEATTL Portlan Los An New O Houstor Chicago New Yo

FACTS ABOUT Exide®

IRONCLAD® MARINE BATTERIES



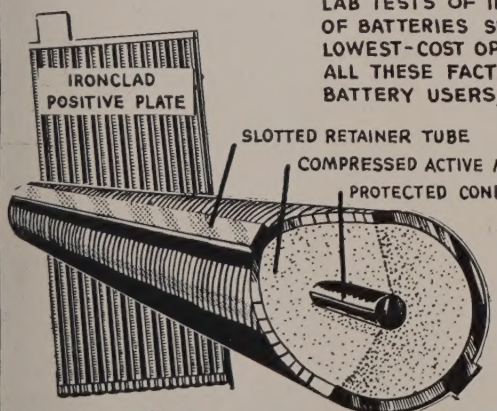
FISH OR SEA MONSTER?

DETECTION GEAR POWERED BY EXIDE-IRONCLADS HELPS FIND OUT

FISHING BOATS USE DEPTH FINDERS TO LOCATE SCHOOLS OF FISH HIDDEN BENEATH THE SURFACE OF THE SEA. THIS EQUIPMENT IS EXIDE-POWERED AS IS OTHER ELECTRONIC GEAR SUCH AS RADIO TELEPHONES AND RADAR. EXIDE-IRONCLADS ARE ALSO USED TO START ENGINES AND FURNISH AUXILIARY LIGHT AND POWER. THEIR DEPENDABLE OPERATION IS VITAL TO SAFETY AT SEA.

BATTERIES ARE WORKED TO DEATH BY EXIDE ENGINEERS TO LEARN SECRETS OF LONGER LIFE

SINCE 1910, RESEARCHERS HAVE GREATLY IMPROVED EXIDE-IRONCLAD PERFORMANCE AND USEFUL WORKING LIFE, BUT THE BASIC IRONCLAD PRINCIPLE OF TUBULAR CONSTRUCTION REMAINS THE SAME.



LAB TESTS OF IRONCLADS AGAINST CONVENTIONAL TYPES OF BATTERIES SHOW THAT IRONCLADS GIVE BETTER PERFORMANCE... LOWEST-COST OPERATION AND EXCEPTIONALLY LONG LIFE. ALL THESE FACTS, DEMONSTRATED BY THOUSANDS OF BATTERY USERS, ARE THE REASON WHY **EXIDE-IRONCLADS** ARE YOUR BEST POWER BUY **AT ANY PRICE!**

LET EXIDE HELP SOLVE YOUR MARINE BATTERY PROBLEMS. ❶ CALL YOUR EXIDE SALES ENGINEER FOR FULL DETAILS. ❷ WRITE FOR FORM 5190-ALL ABOUT IRONCLADS FOR MARINE SERVICE, WITH SPECIFICATION SHEETS.

Exide INDUSTRIAL DIVISION, The Electric Storage Battery Company, Philadelphia 2, Pa.

Los Angeles 15, 1043 S. Grand Avenue — San Francisco 24, 6150 Third Street — Seattle 4, 1919 Smith Tower Building

Exide Batteries of Canada, Limited, Toronto

fresh!

as it comes from the sea ...with western waxed wrappers

Surest way to haul in more sales: bait your product with Western Waxed Paper's alluring carton overwraps. Consumers can't resist the smart, modern designs, sparkling sheen and appetizing vignettes of colorful Western frozen seafood wrappers. Western uses satin-smooth opaque stock that *protects* as it merchandises (. . . *tough* stock, too, for efficient production-line operation.)

WESTERN WAXED PAPER

DIVISION CROWN ZELLERBACH CORPORATION

SAN LEANDRO, CALIF. • Plants and Sales Offices at Los Angeles, and Portland, Ore.